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MAY 1958

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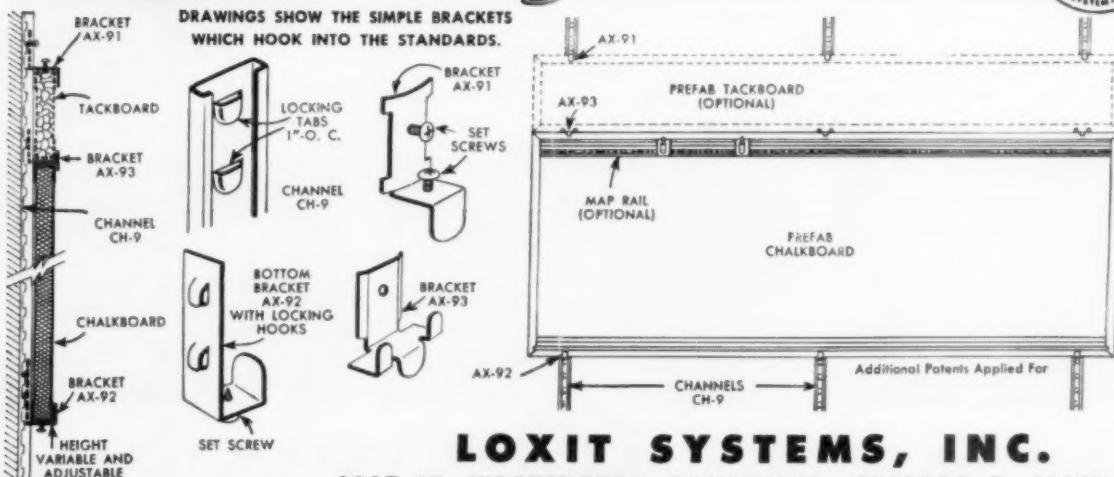
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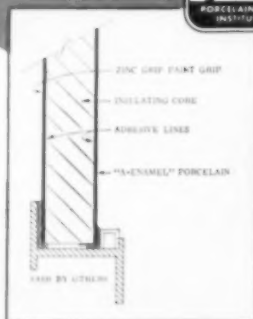
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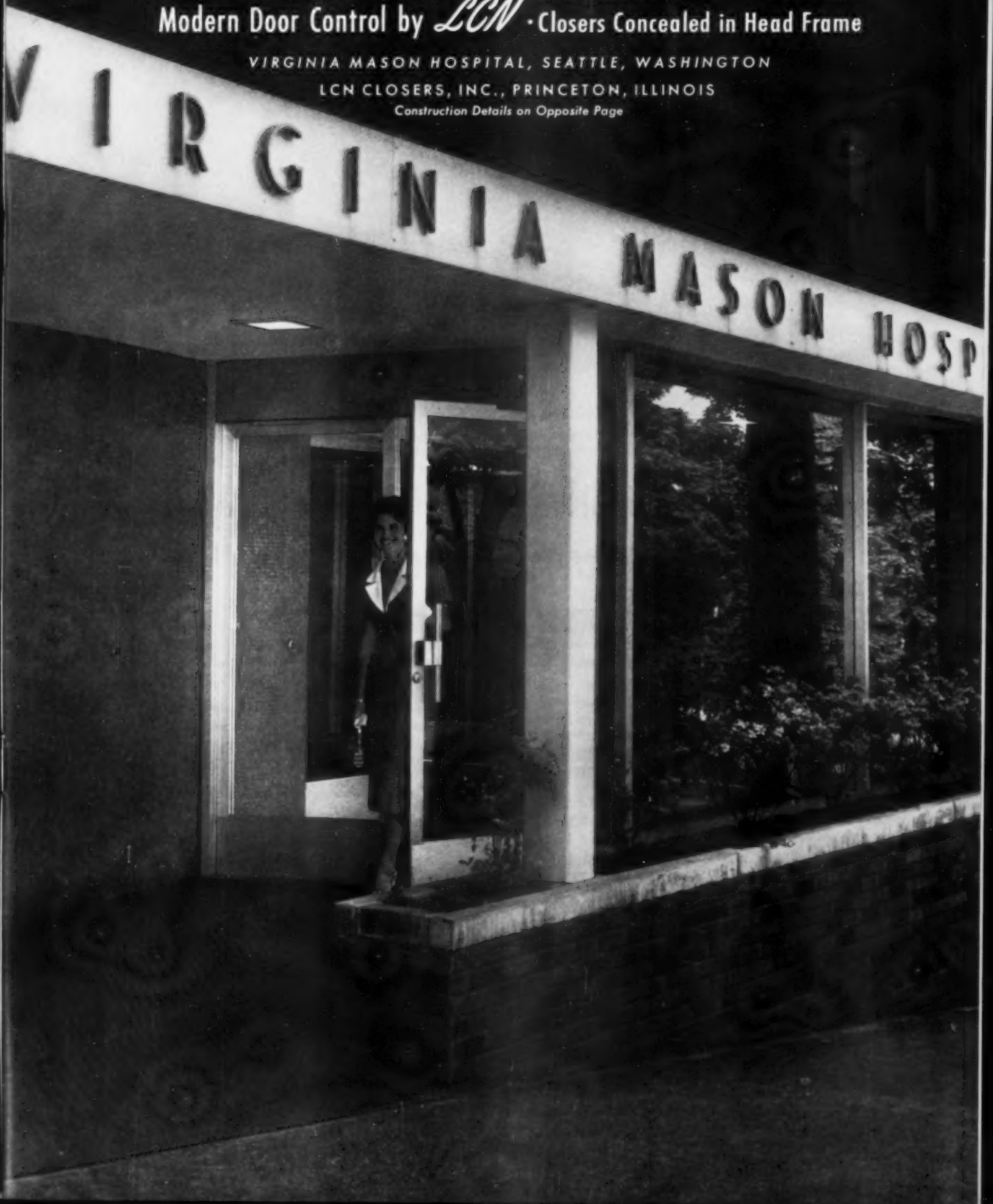
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Construction Details on Opposite Page





Armstrong Cushion-Eze Underlayment adds extra "give" to resilient floors, makes them even more comfortable and quiet underfoot.

New foam underlayment for resilient floors increases comfort, quiet, serviceability

A new development created through Armstrong research brings an entirely new concept of underfoot comfort and quietness to resilient floors. In addition, it makes possible the installation of new resilient floors over existing linoleum and other resilient floors in remodeling.

Carrying the trade-marked name of Cushion-Eze Underlayment, this new Armstrong lining material for resilient floors consists of a cushioning layer of air-filled foam fused to a topping of felt. It provides a thick, springy cushion that absorbs the impact of footsteps and reduces the sound of rolling equipment and dropped objects. In residential and other light construction, Cushion-Eze Underlayment also helps sound condition interiors by reducing noise transmitted through the floor to areas below.

Cushion-Eze Underlayment can be specified for use on all types of suspended floors with linoleum, sheet vinyl Corlon, and Linotile. It is not recommended for on-grade or below-grade floors and is not recommended for use under asphalt tile, vinyl asbestos tile, homogeneous vinyl tile, rubber tile, or cork tile.

The foam construction of Cushion-Eze Underlayment absorbs the movement of the boards in wood subfloors and tends to conceal minor irregularities in the subfloor. For these reasons, it takes the place of conventional lining felt and usually eliminates the need for a plywood or hardboard base. No special adhesives are required for the installation of Cushion-Eze Underlayment.

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Because Cushion-Eze Underlayment allows the flooring sur-

face to "give" gently under impact, it minimizes the possibility of dirt and grit being ground into the floor. Thus, resilient flooring installed over Cushion-Eze Underlayment is easier to clean and more resistant to scratches and marring.

Simplifies remodeling

Cushion-Eze Underlayment can be installed right over existing suspended resilient floors, except asphalt tile and vinyl asbestos tile. Thus, it makes the replacement of many resilient floors faster and less inconvenient than by traditional methods requiring the old flooring to be ripped up, sanding the subfloor, or nailing down hardboard. In remodeling, however, the existing resilient floor must still be firmly bonded to the subfloor. Before installing the new resilient floor with Cushion-Eze Underlayment, the surface of the existing floor requires only a light sanding to remove wax and dirt.

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Human Engineering guides design of award-winning research center

The New Engineering Science Center of the Northrop Division of Northrop Aircraft, Inc., has recently been awarded top honors for beauty and utility of design by the Los Angeles Chapter of A.I.A. It was selected from more than 400 structures entered in this competition. Human engineering was the most important single factor that went into its design. The needs and comfort of the men and women who would work there were taken into consideration and the modular interiors were engineered to meet these needs.

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date) and *Mechanization
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IN this "diary" of the development of contemporary architecture and urban design, Sigfried Giedion presents his own views on the place of architecture in the public conscience. He develops a theory, in particular, that artists and the general public have been divided too long by a "ruling class" great in intellect but sadly lacking in visual understanding.

He also discusses the "need for a new monumentality" in design, the importance of "social imagination" and "spatial imagination" as an alternative to chaos, and the need for a close relation between art and architecture. This is a notable addition to Giedion's other indispensable works on art, architecture, and urban planning.

40 pages of illustrations.

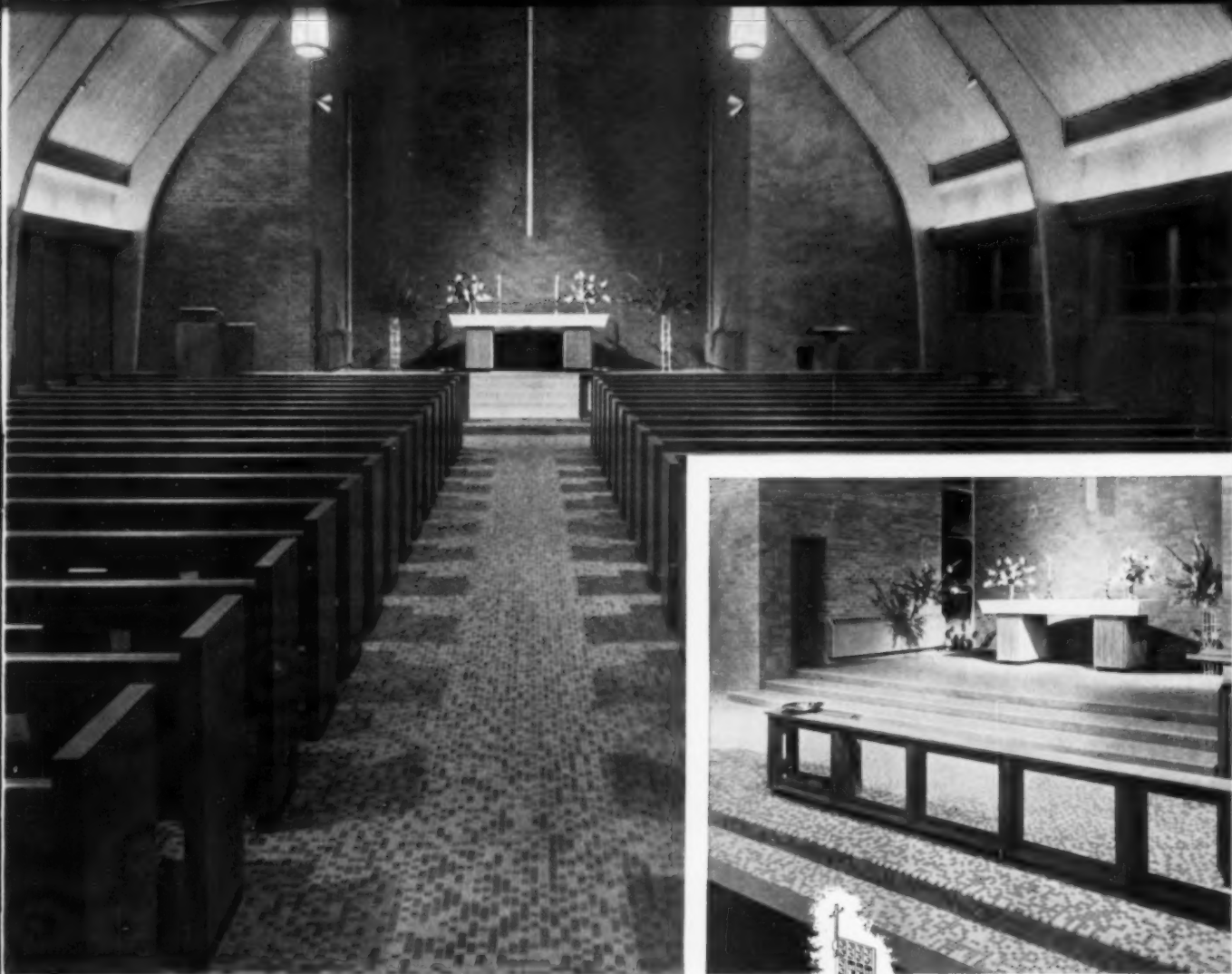
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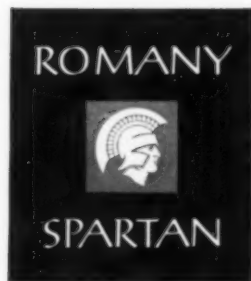
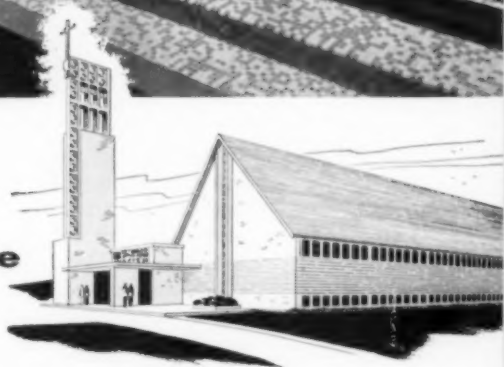
First Methodist Church, Hopkins, Minn.

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Romany•Spartan tile lends serene beauty to Minnesota church



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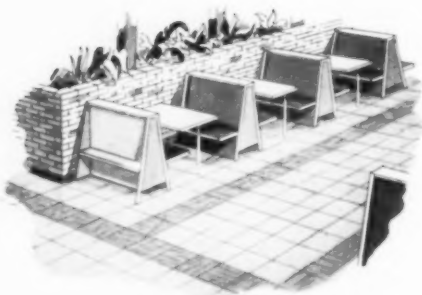
Simplicity of line and imaginative blending of textures and color keynote the warm, friendly interior of the new First Methodist Church in Hopkins, Minnesota. To help achieve this dignified, yet colorful effect, the architects chose Romany•Spartan small unit tile in subdued colors—plain for chancel floor and random pattern for sanctuary.

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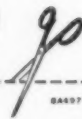
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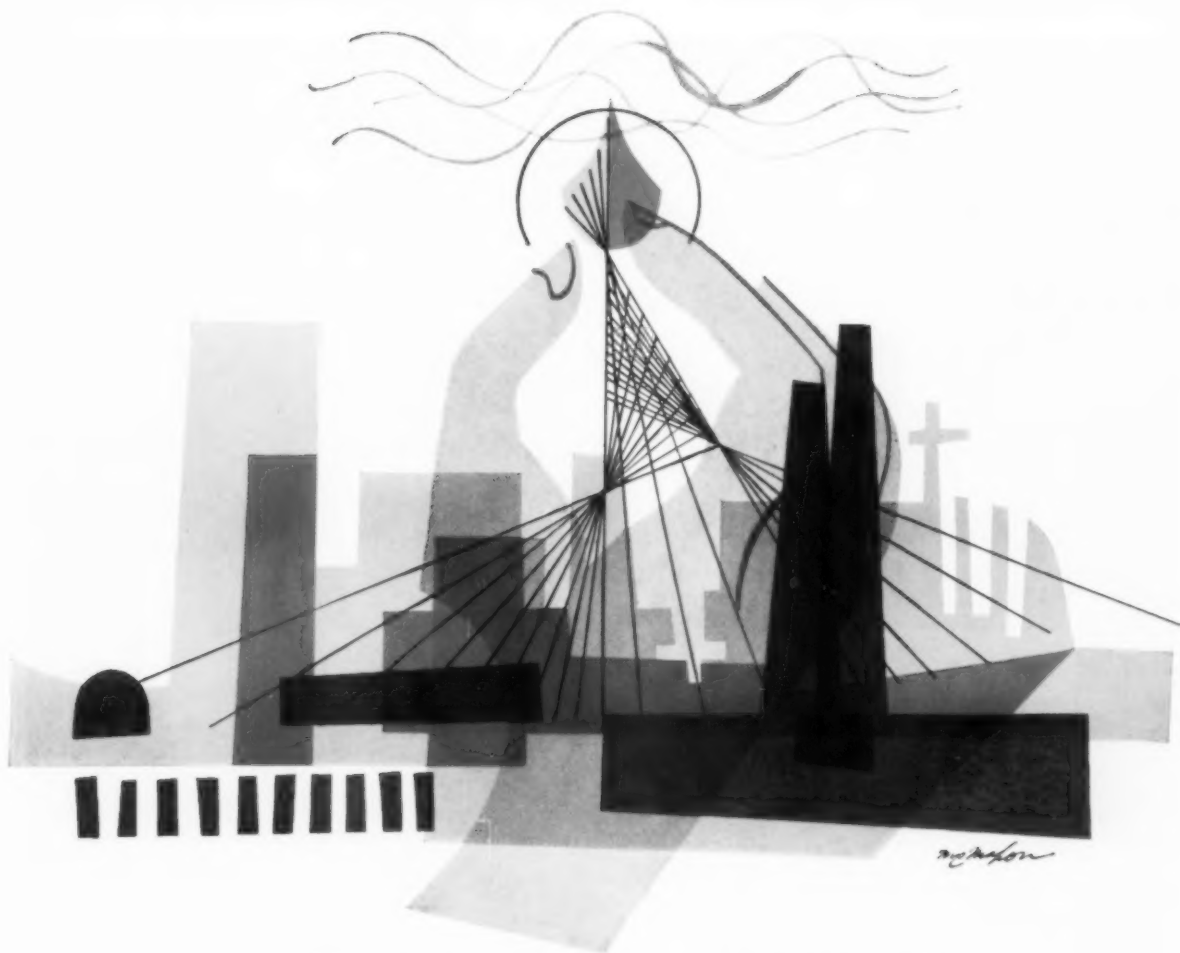
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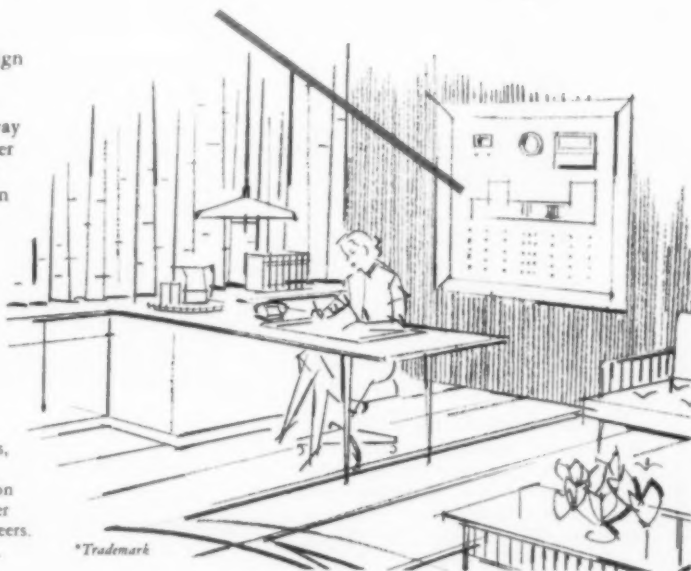
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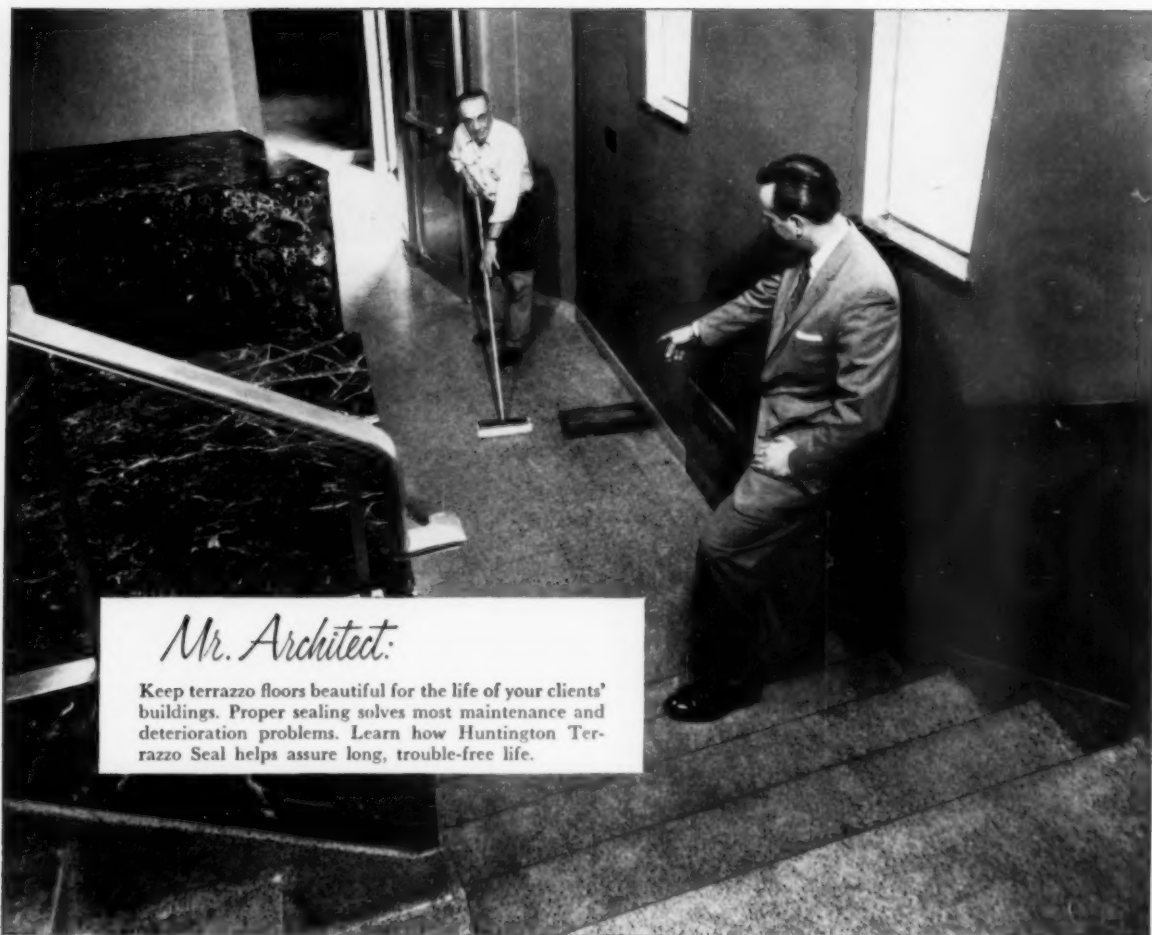
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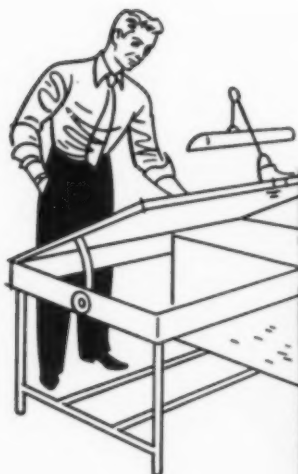
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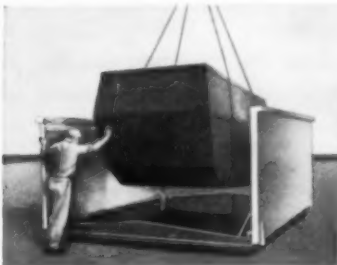
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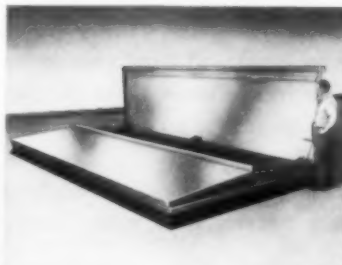
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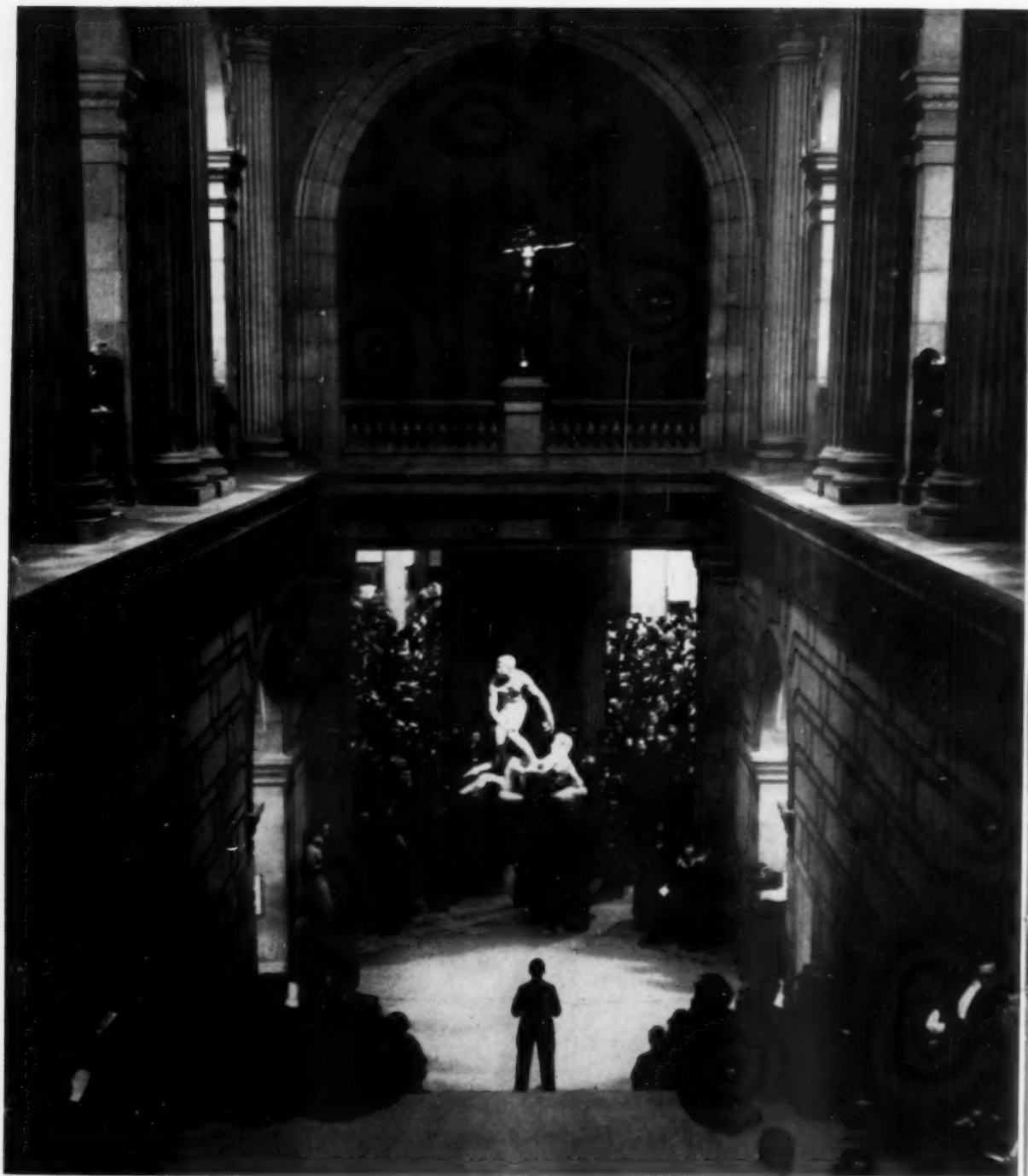
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CONCERT NIGHT AT THE METROPOLITAN MUSEUM OF ART

PHOTOGRAPH BY ALOYSIUS SCHUSZLER

MAY 1958

Have We Come of Age?

BY THOMAS K. FITZ PATRICK, FAIA

*Dean of the School of Architecture
University of Virginia*



NOW WE ARE PAST THE MID-CENTURY and we have recently made a serious attempt to evaluate the profession of architecture in America as it now stands. The nature of architectural education has been examined and measured. The value of licensing procedures for architectural practice has also been critically reviewed in operation. At long last we have come of age as a profession in America and we have tried to assess our true value to ourselves and to the nation. Having done this, have we not reached the point where we should make a sincere and soul-searching evaluation of the architecture we have created in the immediate past and are now creating for the future?

It is evident that there does not exist in this country at present a reasonable number of properly trained critics of architecture. Critical works of great brilliance appear all too infrequently and seldom receive the public attention they deserve. As a profession we are failing in our duty to develop an informed public in this country. We have given virtually no serious attention to this task in recent years and we must accept a certain responsibility for the lack of discrimination on the part of the lay public in its acceptance of much of the architecture we are now producing. Unfortunately this can also be said of most of the other creative professions in this country as well.

What makes a good critic? Where do we find him? How is he trained? In a recent interview the eminent composer-conductor Leonard Bernstein developed answers to these questions for the musical profession. He feels it is of primary importance that the music critic have "ears to hear with." These ears must be trained to interpret, without error, the musical works being evaluated. He must be sensitive to pitch and be able to separate aurally a voice or instrument in any musical group or orchestration.

Mr. Bernstein stated further that the good critic must maintain a sense of detachment and that the professional musician, successful or otherwise, is seldom a good critic. Finally, if the critical writing has merit, it can be of real help to the artist, composer, or conductor in improving his capacities as a creative person, and he sincerely searches for this help.

To some degree similar capacities must be found in the critic of architecture. In addition, he must use virtually all of his perceptual senses to help him to interpret fully any work he is evaluating. Probably he should be detached from the profession of architecture since the practicing architect normally develops prejudices which tend to distort clear and objective critical analysis. Obviously he must have a broad, penetrating, and intimate knowledge of the architecture which has been developed throughout man's history. He must be a trained observer and possess the ultimate in keen critical judgment. Of utmost importance, he must develop rare literary talent to interpret the real essence of the architecture and convey this captured emotion to his audience with great clarity. In the preparation of a critical essay there is ever-present the danger of obscuring faulty or superficial judgment with a heavy fabric of verbal embroidery.

Of particular significance is the fact that at least three universities are currently developing degree programs from which we may reasonably expect individuals to emerge who have the potential to become expert in the art of criticism. Generally these programs focus on major courses of study in the history and philosophy of architecture, enriched by education in observation and criticism through seminars, design programs, and evaluating procedures. There is reason to believe that such programs could provide the basic background to develop ultimately a sub-

stantial group of scholars and authorities in the field of architectural criticism.

What then is the role of the journals of architecture currently being published in this country? Should they assume the posture of the architectural critic? Generally the professional journals which are supported by advertising have been subjected to a good deal of unwarranted criticism and abuse from time to time. In all fairness the task of such a journal is primarily reportorial. Clear objective reporting on current directions in architectural thought and performance is no easy chore at best. New and significant architectural projects demand continual search and advanced planning is a real necessity. Admittedly top-level journalistic and reportorial personnel seem always to be in short supply. Critical writing under the limitations under which such journals must operate can hardly be truly objective and must of necessity be conditioned by the overriding policy of the particular journal. It is only natural as a result, that the journals resort to an ever-expanding use of photographic reporting with major annotations. This is a poor substitute for descriptive writing and very often the photographic report of a building is extremely misleading. Such reporting suffers from half-truths and over-dramatization and presents at times a charming never-never world of complete absence of reality. The limitations of the camera present a constant kind of frustration. Another criticism which is leveled at such journals, generally accuses the editor of not telling the "real story" behind the building or of being unwilling to explore the obvious weaknesses and mistakes which make the particular project less than significant. Again in all fairness, the task of the editor would be magnified enormously were he to pursue a righteous crusade of "exposure" and he would soon run out of repeat clients among his architectural associates. Whenever an editor has raised his lance in a crusade it has very often been a costly experience and at times disheartening. Faced with these apparent facts, must we take for granted that the architectural critic has no available outlet for his much-needed talents?

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Assuming that a reasonable number of architectural critics could be trained to a degree that they might achieve significant stature as scholars in this field, is it not proper to feel that their talents would be used and their voices heard? If they were to exert broad influence on public taste and opinion their efforts should not be confined to the architectural journals and the publications of the Institute. They must of necessity reach out to cover all kinds of publications and at all levels from the daily newspapers to the select quarterly. There is really no

limit to good coverage if the wealth of talent needed could be realized. As professional architects we spend far too much time talking to our colleagues in an attempt to convince ourselves of our real worth to an untutored public. Could we develop an informed public there would be less need to explain and extoll our role in society.

In a very particular way the trained critic would be enormously helpful to the architectural student, the embryo-architect. It is plainly evident that the architectural historian is once again coming into deserved prominence in architectural education. Our major architectural schools have done some sincere soul-searching in this regard in recent years and the results are heartening. Top history scholars have been sought out and found. New and experimental approaches are being developed in this teaching field and already this influence is becoming obvious. The purge of the past thirty years has run its course and the scholar once more emerges from his cave with an aura of appropriate distinction. The student listens to him now with true respect and admiration. He is no longer satisfied with the slick photographs and an *Alice in Wonderland* language. Contrary to public statements the architectural student is reasonably literate and he can and does read. Sound architectural criticism presented with some brilliance would have a definite appeal for the serious student. He is ready and eager for the challenge.

It would be inappropriate at this time to dwell at length on the legal pitfalls surrounding the publishing of critical essays on specific buildings. Providing the author is a scholar and has achieved deserved prominence in this field and that furthermore his writing is devoid of malice or animosity, there would normally be no serious challenge of legal entanglements. Indeed the sincere practicing architect, like the professional musician or composer, should be constantly searching for improvement in his talents as expressed in ultimate form. He would profit enormously from sound objective criticism since he himself is often too close to the matter creatively and loses the sharp perspective and focus so essential to the achievement of works of significance.

As an immediate step this challenge of criticism could properly be taken up by the *Journal* of the Institute. This publication with its rapidly improving characteristics could perform an outstanding service to the profession by assuming real leadership in this task. It would be enormously encouraging to the scholar, the teacher, the student, and, of course, the architect. For so long a time it has been needed. It would be most appropriate to begin now since at long last we have "come of age."

The Forward Look in Architecture

BY PHILIP N. YOUTZ, *who has been a practicing architect, Director of the Brooklyn Museum of Art, co-inventor of the Youtz-Slick lift-slab system, and is now Dean of the College of Architecture and Design at the University of Michigan. The article below is adapted from an address he delivered at the annual convention of the Michigan Society of Architects.*



DURING THE LAST TWO DECADES, the architect has prospered. The harvest which he has reaped, however, is modest in comparison with the wealth amassed by the manufacturer or the businessman. He has not received as much reward in dollars for his professional work as does the doctor or the lawyer. But he has been able to pay his bills, to enlarge his office staff, and now and then to take his wife out to a good restaurant for cocktails and steak. It is hard to recall a time when architects generally have been so much in demand.

What has been the effect of this success on the architect? In my opinion, it has been good for him! He has felt himself needed by his community and, strengthened by this encouragement, he has devoted all his powers to the production of better buildings. The standards of architectural design have risen, although he has had to work under pressure to turn out the drawings to control the growing volume of work. Not only are there many outstanding examples of his genius, but the average run-of-the-mill work from his offices is fresh and stimulating. Prosperity has brought out the full range of the architect's professional skill and enriched the public with a great variety of admirably proportioned structures. These new buildings add greatly to both the esthetic and the economic capital of the country.

Depending on whether you are a Republican or a Democrat, you are aware that this winter we have entered a period either of readjustment or of depression. Whichever of these conditions exists, neither of them is good for architecture or architects. The demand for quantity production, which our larger offices have enjoyed, is coming to an end, and we must depend on the small volume of work which the public regards as necessary even in hard times. This means a certain amount of involuntary leisure even though we inspect our dwindling numbers of

jobs daily. While this unfilled time cannot be described as a boon to architects, there are many things we can do to fill these unpaid hours, and make them profitable to us now and in months to come.

Instead of office expansion, we must now strive to broaden our outlook and education, so that we develop our fullest professional powers. It is well for an architect to be a sensitive and imaginative designer, an experienced and sound structural man, a canny businessman, a good office manager, and a polished diplomat in negotiating with clients. But in addition to these few basic requirements, the architect must create for himself a position of trust and power in his community. He cannot do this by reading a book on "How to Influence Capitalists and Develop Prospects," though such a text might be useful. Leadership is an excellent thing but the question always arises, "Where are you going to lead?" To attract public confidence, the architect must understand the problems of his age and equip himself to help the public discover its own solution.

Concretely, this means that the architect must study the industrial society in which we live, and familiarize himself with the intricate workings of its institutions. He must be able to sit down with the merchant and analyze the possibilities of a shopping center not only as an attractive example of architecture but as a means of distributing a forecastable volume of goods. He must know enough about transportation so that he can attract the mobile customer on wheels. His broad parking areas should not be blazing infernos of heat in summer and drifted arctic barrens in winter but be supplied with shade and windbreaks by judicious planting of trees in rows or groves. He must know how to talk money with the banker so as to demonstrate to him the earning power of his architectural products.

Does this mean that the architect ought to be a social psychologist, sociologist, economist, statistician, and politician as well as the artist who designs buildings? It may surprise you to hear that the answer is yes. Architects should know something about all these subjects, though individually they will probably have to limit themselves to some one of them. The education offered in schools and the skills experienced in offices, are merely the core of a liberal professional training. This core contains the seeds of the training. But to partake of the whole apple of knowledge, the designer of modern culture must broaden his outlook to the limit. He must take his rightful place among the managers of democratic society. For this responsibility it is not enough that he be the coordinator of his buildings; he must be a coordinator of his society.

YOU MAY THINK I am conjuring up the image of the renaissance universal man. In this age of specialization it is becoming increasingly necessary to balance professional knowledge with a more general outlook. A leader must have a philosophy as well as a skill. This philosophy may be a practical working knowledge of emergent human values and social trends. Its function is to enable the thinker to extrapolate from the past and analyze the future. This kind of philosophy is a compass that points to the course which society is following.

Let us attempt to apply this line of thought to some of the types of building likely to be in considerable demand even in a time of recession. During such a period the production of children begins to decline at a somewhat later date than does the manufacture of other commodities. Moreover, the growth of children, once they are born, is little affected by economic stringency. So the demand for schools is certain to continue, unless we are willing to raise a generation of illiterates.

The literature on school requirements is stupendous. We should cull from it what is fresh and significant. This select portion of educational writing should be as familiar to the architect as to the educator. From this common stock of knowledge they must produce better schools—more economical, more effective in providing a setting for learning, more flexible in case changes and additions are needed. The school architect should prepare himself to think as an educator.

Architects with experience have already discovered the need for research in the social fields covered by their practice. This requirement may seem a strenuous one to assume on top of other professional demands. But it is encouraging to recall that the most successful architects have always

gathered considerable information of this kind and incorporated it into their designs. In our college professional courses students are assigned library reading for a week or fortnight on each particular problem before they begin their design sketches. The lawyer in preparing an important case studies all the legislation, all the records, and all the data on earnings which may affect his client. The architect who would master his subject must find time to do the same thorough research, before he begins to think of a spatial expression for his ideas.

Last fall the *Reader's Digest* published an article under the title, "Do School Pupils Need Costly Palaces?" All school architects would agree with all taxpayers in recommending intelligent economy in school design. A white elephant or a palace is a bad recommendation for a professional man! But the architect has no use for shoddy work likely to prove expensive to maintain and impossible to enlarge to meet growing needs. How much money should a community spend on a school project? The answer differs in various parts of the country, but the school architect tries to balance present requirements and probable needs in the immediate future, with the realities of the community budget. He submits to the school board comparative costs and points out items on which they can economize. Experience teaches the designer of schools ways to eliminate waste space, to simplify construction and to incorporate economy both in first cost and ultimate cost. At the same time the architect strives to maintain high standards so that the students and teachers may benefit by the best space arrangement, lighting, color, sanitation, heating and cooling, and most important of all, enjoy imaginative surroundings which will contribute to creative learning. The taxpayer in most communities relies on the architect to help develop a sound financial program as well as a school building of distinction. Such architectural service requires knowledge far beyond structural and visual design.

The architect who enters the field of college and university design again finds himself in the deep waters of educational theory. Until recently most institutions of higher learning sought architecture that recalled the classic past. But recently they have turned from lithic Latin to the architectural vernacular of our century. With this change has come a new demand on architecture. A building no longer serves simply to support ivy, or as a monument summoning up past memories, or as a means of separating space. Today the college president expects a building to be an active educational instrument. He is interested in what a building does as well as in how it looks. The designer of such a

modern structure must himself assume the role of an educator. He is dealing not with static forms but with dynamic buildings that contribute an important part to the educational process.

To prepare for a university job, the architect needs to learn the outlines of modern educational theory. What is a university? Today we find that the answer to this question is evolving from year to year and from institution to institution. One university builds its undergraduate library so that students may read beside the stacks and find the books they need within arm's reach. Another school emphasizes laboratory experience for all students. A few still believe that bigger stadiums and gymnasiums and swimming pools are the answer to all problems. The architect must find into which category his client's institution fits, or whether he is expected to produce structures which will miraculously fulfill all these contrasted functions at once.

The easiest type of house to design is the mansion where cost is a minor consideration. But with high income taxes few of these opportunities are open at the present time. The demand today is for medium and low cost homes. More and more the public is becoming dissatisfied with conventional "developments." The square miles of small box-like houses, all with picture windows and breezeways and two-car garages, no longer appeal to buyers as they did a decade ago. There is an urgent need for a new housing formula. Is there merit in the British idea of adding not more than fifty or a hundred houses to an existing village, taking care to avoid changing its traditional charm? Should we build multiple dwellings to greater height and gain space by living in towers set among shady parks or farm lands? Or shall we count on an exodus from the city of both offices and homes in new business communities? Should factories be set in parks ringed with pleasant cottages for the workers and served by shopping and recreational facilities?

NO ONE KNOWS the answers to these questions but the architect is the thinker who must ultimately propose their solutions. Some of these the public may reject, some, home hunters will welcome. To analyze social needs for shelter and security and happiness means a profound study of human behavior and development. Certainly the concept of the separate house with a blue spruce or a Japanese cherry on its front lawn, is wasteful of space. If the street number becomes disattached from such a house it is impossible to distinguish it from a thousand others. Indeed, without the street number a man might confuse his house with that of someone else and find himself living with a strange woman and

annoyed by some other man's children without ever being aware of how this accident happened!

These days we have leisure to return to the old headache of housing and to try to offer a more rational answer than the existing scene reveals. We are quite aware that the small town solutions that served us in our earlier days fail to solve our metropolitan requirements. Housing that is not kept up to date produces slums. Slum clearance is costly whether the people are moved or given better shelter. It is time we took another look at this situation. Our equipment for searching such an answer must be statistical studies of population growth, as well as the designer's sketches and layouts. In short, in order to cope with this often-worked-over problem, we need a wider knowledge of society.

One of the encouragements to the designer is the opportunity in church architecture. Throughout the country congregations are building new places in which to worship and meet together. There seems to be a certain theological change in all denominations. Religion has become a cheerful type of activity best carried out in sunny surroundings. The auditoriums are flooded with light. The parish houses are above ground instead of in crypts or basements under the earth. The church appears to be evolving toward a community center for use seven days a week. The architect must absorb this new theology and develop a new set of designs for sun worshippers, or at least for audiences which enjoy light more than the dim interiors once associated with religion.

The church architect must know both the traditions and the contemporary expression of the various faiths. In this field architecture has always been both a symbol and shelter. A good deal of freedom exists today in the interpretation of the ritual phase of religion but for that very reason it is important that the architect be enough of a student to join with the minister or priest or rabbi in selecting the design elements from the past which should be retained. Both the architect and the congregation need to meet together often to be sure that the resulting building offers the proper hospitality to their faith.

During this recession period we will continue to design a variety of essential institutions, hospitals, laboratories, airports, and many others. Our ability to cope successfully with them will depend less on the current formula, than on the enlarged conception of their functions which we are able to develop. This kind of fundamental social thinking requires scholarship and reflection. We might take a cue from another artist, the actor. Before he takes a new part, he goes through the daily routine of the character. He studies an imaginary life of the man and

fits himself into that biography. There is a difference, however. The parts which we must fill are real. We are faced not with a stage situation but with a society that is changing so dramatically and so rapidly that it has outgrown its old architectural environment. The laboratories and hospitals and airports which we produce today have no close prototypes in the past.

IF YOU LOOK UP the Policy Statements of The American Institute of Architects, made at its Centennial Convention, you will find that the points stressed here from the educational standpoint are those presented in these documents. But the AIA program goes somewhat beyond the suggestions in this paper. To quote, "The American Institute of Architects maintains that its members have an obligation to bring appropriate architectural services and the benefit of their professional competences into the whole field of urban renewal, community and regional planning." The modern planner is descended from architectural parentage. Though today his profession has specialized on larger spatial relations, the bond between architect and planner remains very close. Planning has opened up an immense new field where the two types of architect may collaborate to mutual advantage. Since the client in the case of planning is usually a town, city, county, or state government, the job of programming these larger area relations can go forward even when private clients have to curtail their expenditures. Indeed a depression has always proved a more favorable period for the planning, than for the building division of architecture.

Whether the route taken is through association with the planner or through a study of the community in depth, the modern architect finds his largest opportunity as a leader in social advance. His bread and butter may be the individual building, but his outlook must be broad enough to encompass the entire area and social order of which his building is a focal point. The architect thus becomes an ecologist concerned with the economic and other social relations of the total human environment. By thus expanding his own horizon he can help to guide the community which he serves and assures his individual client that his particular building will be integrated with its social context.

As the architect becomes a learned student of society, he may confidently expect to gain insights into the cultural needs of our industrial system. These requirements, he is able to translate into convenient order and esthetic form because he is a designer and artist. This ability to objectify the solution of a social problem into a physical pattern that has unity and strength is the gift of the architect to his time. While commercial values rise and fall on the crests and valleys of inflation and deflation, art values abide. Society's investment in architecture endures and enriches our living when other values have decayed. This is the secret of older continents such as Europe. Her buildings are many of them ancient and obsolete. But each year they attract thousands of money-spending tourists who delight in viewing them and enjoying their design. Though the architect may become a scholar his prime duty still remains to create an industrial America that is humanistic and imaginative and beautiful.

Necrology

*According to notices received at The Octagon
between February 27, 1958 and March 26, 1958*

COLLINS, CHARLES H., Bellefontaine Neighbors, Mo.

GLEESON, RAYMOND T., Philadelphia, Pa.

KENNEDY, HENRY L., Belmont, Mass.

KULP, CHARLES H., Trenton, N. J.

MANN, ESTES W., Memphis, Tenn.

ROBERTS, HARRIS H., Waco, Texas

Honorary Member

OLMSTED, FREDERICK L., Brookline, Mass.

Honorary Fellow

CALZA BINI, ALBERTO, Rome, Italy

From the Executive Director's Desk:



Photograph by Van Tassel

THE CONTROVERSY WHICH HAS ENSUED from the proposal to extend the East Front of the Capitol has been tinged with an acrimony to which distortion and misunderstanding have made their contribution. It is time to set the record straight.

First of all, the position of The American Institute of Architects should be clearly stated. Traditionally, The American Institute of Architects has been opposed to changing the East Front of the Capitol, believing that the East Front is architecturally meritorious as it now stands and convinced that it has come to be so indelible a part of the American scene and enjoys such historical significance that altering it would cause serious hurt to many, many people in the profession and outside the profession. Recent comments in the press and reports from all over the country have confirmed the Institute's belief.

Some years ago when it became necessary to rebuild the White House, representatives of The American Institute of Architects urged the President of the United States, Harry S. Truman, to maintain the outward form of the White House, which the public had come to love and know, even realizing that the retention of this form would increase the cost of the operation. Suffice it to say that the President of the United States needed no urging, for he himself was then convinced on his own of the sacred respect in which the outstanding monuments of our federal government are held by the people. It is believed that the Capitol enjoys possibly the highest prestige as a monument of any structure in this land, not even excepting Faneuil Hall in Boston or Independence Hall in Philadelphia.

The American Institute of Architects reaffirmed its position in three successive conventions. In 1955 by the following resolution in Minneapolis:

"RESOLVED, That The American Institute of Architects, in Convention assembled, register with the Congress its strongest opposition to the alterations of the external form of the Na-

tional Capitol and urge the Congress to preserve intact the authenticity and integrity of the Capitol as the Nation's greatest historic monument, and be it further

"RESOLVED, That The American Institute of Architects offer its services to the Congress through a Committee of distinguished and unbiased architects who would advise as to how to obtain more space without sacrificing these priceless historic values."

By the following action taken in 1956 in Los Angeles:

"The considerable public interest in the proposed alterations to the East Front of the Capitol led the Board of Directors into further consideration of these alterations. It was concluded that the action taken at the 1955 convention expressed the Institute's viewpoint appropriately. The Board recommends that attention be focused on the overall development of the East Plaza."

The 1956 Convention in Los Angeles approved the foregoing Board action.

And the following resolution adopted in 1957 at the Centennial Celebration of The American Institute of Architects held in Washington, D. C.:

"RESOLVED, That The American Institute of Architects convened for their Centenary Celebration reaffirm their conviction that the East Front of the National Capitol, the outstanding architectural heritage of the American people, should be preserved in its present form and position in accordance with the considered views of the majority of informed architectural opinion."

The officers who conduct the sessions of the conventions of The American Institute of Architects have never prohibited expressions of opposition to a resolution which has been offered on the floor of the convention, nor have administrations of the Institute ever attempted to stifle opposition. At the

three foregoing conventions not a single person presented an argument in opposition to the resolutions as offered.

The American Institute of Architects, its administration and officers and staff have, therefore, no alternative but to accept the thrice affirmed expression of opinion of the Institute as their mandate. It has been charged that those entrusted with the implementation of Institute actions and policies have far exceeded their prerogatives. Recently they have been told by the architects for the extension that all that was expected of them was "to present a dignified statement." (This would seem to be a naive suggestion.)

The Institute has so increased in power and prestige that it has become a forceful organization. It has established itself as the voice of the profession and made that voice heard. The officers and staff of the Institute are guilty only of speaking with firmness and clarity in supporting and enforcing its policies as the voice of the organized profession.

It has been stated that the action of the convention of the Institute was not unanimous. The record does not support that contention.

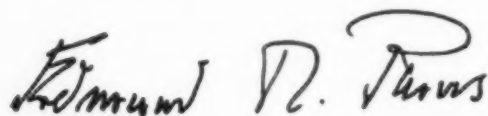
The procedures of the Institute are governed by the by-laws and Rules of the Board. Its operation is not too dissimilar to that of the Congress of the United States. When the convention speaks, the Institute speaks. Now the Institute wants to make one point perfectly clear. It is not opposed to any of its members. It is not criticizing them or condemning them. To the contrary, The American Institute of Architects believes that the architect Consultants to the Commission—Mr. Shepley, Mr. Harbeson and the late Mr. Arthur Brown, Jr.—are and were three of our most distinguished members. The architects engaged by the Commission are outstanding men of high experience and competence. No

criticism has been leveled at them. In their report of August 19, 1957, to the Architect of the Capitol, Messrs. Harbeson, Shepley and Gilmore D. Clarke (who became a Consultant after the death of Mr. Brown) said:

"It was agreed between your Consultants and the Architect of the Capitol that the question whether or not to move out the East Front would not be a matter for discussion as this had been decided already by an Act of the Congress. Your Consultants are therefore concentrating on the problem of how best to accomplish the will of the Congress within the limitations imposed by the Act in ways that will be least detrimental to the beauty and majesty of the East Front."

The Smith-Clark Bill (S.2883) which the Institute is supporting, would repeal existing legislation requiring the East Front to be moved. The architects thus would enjoy complete latitude and the exercise of discretion without the restriction under which they have been obliged to work.

The Institute is opposed to the idea of changing the East Front of the Capitol. The Institute would hope that the very considerable talents of the architects and the architect advisors can be brought to the benefit of the Capitol in a way which and in an area which the Institute could happily support. This is not dictation of design. This is opposition to an idea and an expression of hope that such improvements to the Capitol that may be needed can be accomplished without offense to any citizens of this country.



Awake and Sing of Many Things

Fission- y, fusion-y, isotope- ius
Folk could do with the scope of Gropius.
The pennywise practical's inert
But the soul can fly free with the sweep of Sert,
Fulfilling mere function's slavish duty.
Here's to a shameless Stone-y beauty.
You know what Marcel Breuer's brewing?
Charm! Any harm in what he's doing?
On with Saarinen-ish search for light.
No one way is ever Wright!

ELISE JERARD

What Kind of Office?

BY CLINTON H. COWGILL, FAIA
AND W. IRVING COUSINS, JR., AICPA

Mr. Cowgill, Professor Emeritus of Virginia Polytechnic Institute, is author of several books and is currently serving as Editor of the new "Handbook of Architectural Practice" shortly to be published. Mr. Cousins is a partner of Casbarian & Cousins, auditors of the AIA and consultants for Standardized Accounting for Architects. The article has been reviewed by the Institute's Legal Counsel, John T. Carr Lowe.



UNDER CURRENT HIGH FEDERAL INCOME TAX RATES, it is worth-while for many architects to consider which of various possible types of organization is most desirable for their offices. The 1956 Survey of Office Practice, conducted by the Institute indicates that more than half (54%) of architectural offices are proprietorships, 43% are partnerships, and only 3% are corporations.

A working organization of any size may be organized as a proprietorship. While it is normal for a proprietor to carry all of the legal responsibility and keep the profits which accrue, both responsibility and profits may be shared with employees in accordance with their contributions and as set out in written agreements.

A partnership may have any number of partners (exceeding one) and partnership agreements may provide for certain partners to assume liability for certain aspects of practice—as for example, engineering—for the other partners. Also there may be various classes of partners with different degrees of responsibility and authority. If most of the permanent members of a working organization are partners, the group is similar in some respects to a co-operative, in which profits are given to the workers. This type of organization has a strong emotional appeal for many architects, but it may have definite disadvantages.

In the states which permit architects to organize as corporations, the company may be wholly owned by its proprietor or by any number of principals. It should be a limited corporation, and all officers should be registered architects. The company may be split into a number of corporations,

each for a specific purpose; as for example (1) for the general practice of architecture, (2) for the production of contract documents, and (3) to provide an office building. A very large office might even set up a separate corporation for the practice of engineering in connection with its projects.

If it were desired to gain some of these advantages and still cultivate the personal and professional aspects of practice, a proprietorship or partnership could set up corporations (where permitted by law) for some of the purposes mentioned above. Thus it may be possible to do the "impossible"—capture the advantages of proprietorships, partnerships, and corporations.

Before entering into contractual relations with those with whom one works, it is prudent to consult a lawyer and a Certified Public Accountant; but many factors should be considered other than tax advantages, and before calling in a tax specialist, the making of simple arithmetical calculations such as those that follow, may lead to some tentative conclusions. For the needed data it may be necessary to review the office accounts for past years in order to determine the expected future average gross compensation to be received by the office, the various elements of cost, and the total profit. Whether or not reserves have been accumulated in the past, definite plans for doing so should be made effective without further delay. Also, as may be seen from the calculations which follow, an approved plan providing for employee retirement benefits is advantageous. It not only encourages thrift and gives stability to the organization, but it also may reduce the total of taxes paid by employees.

In making comparisons of the different types of organizations, the welfare of employees as well as principals should be considered. Considered coldly, it may be recognized that (1) a sharing of profits may be a more effective means of holding valued employees than increasing salaries, and (2) funds placed in a retirement plan may be even more effective than the same amount paid in cash.

To illustrate these points, suppose an architect with nine valued permanent employees, has been paying salaries as indicated in Column 2 of Table I and that from his total compensation there has resulted an annual profit of \$53,750. If the office were reorganized as a firm with ten partners, and this annual profit were distributed in proportion to salaries as indicated in Column 3, then the income of each would be as given in Column 4. Before distribution of profits, reserves equal to 8% of salaries are deducted. (This percentage should vary for each project, being higher for those for which the indirect expense is low in relation to direct expense, and vice versa.) The percentage used for this example is for an average ratio of 70 to 100. The amounts deducted, and the income after reserves for each person are given in columns 5 and 6. Amounts set aside for retirement, equal to 10% of income after reserves, and amounts to be withdrawn by each partner are given in columns 7 and 8. Finally, for Case A, in which most of the working group are partners, the taxable income of each partner and his Federal income tax are computed in accordance with current U.S. Treasury instructions, and the results are given in Column 9. For these calculations, it is assumed that each partner

is married and files a joint return with four income tax exemptions, with other itemized deductions equal to 10% of his gross income. No tax deductions may be made by *partners* for amounts paid into the retirement plan.

Now, for Case B, instead of taking his employees in as partners, Mr. A continues his proprietorship, distributes profits as for the partnership, and works out an agreement with each employee setting out legal responsibilities to be assumed. The taxable income of each employee is smaller than for Case A because payments into the retirement fund are deducted. Unfortunately for him, the proprietor can not deduct his payments into the retirement fund from his income for tax purposes. The taxes to be paid are on the amounts to be withdrawn (Column 8), and are as indicated in Column 10 of Table I. The proprietor pays taxes on amounts reserved. While taxes must be paid by employees on pensions received after retirement, these are generally negligible as compared to taxes on income received during the productive years. With the firm organized as in Case B, the total of Federal income tax payments is \$2207 less than in Case A.

The same office, reorganized as a corporation, is analyzed as Case C. Each employee (including Mr. A) is taxed on the amounts to be withdrawn (Column 8), and the corporation is taxed on amounts reserved. The taxes to be paid by each individual are as given in Column 11 of Table I. The taxes against the corporation as indicated are based upon the scheduled revised rates of 25% on the first \$25,000 and 47% on the remainder. Present rates are 30% and 52%.

TABLE I.

Person 1	Salary 2	Profit 3	Income 4	Reserved 5	Balance 6	Retirem't 7	Withdrawn 8	FEDERAL INCOME TAX		
								Case A Part'p 9	Case B Prop'r 10	Case C Corp. 11
A	\$12,000	\$ 7,540	\$ 19,540	\$ 960	\$ 18,580	\$ 1,858	\$ 16,722	\$ 3,676	\$ 5,475	\$ 2,915
B	11,000	7,000	18,000	880	17,120	1,712	15,408	3,260	2,581	2,581
C	10,000	6,450	16,450	800	15,650	1,565	14,085	2,842	2,272	2,272
D	10,500	6,450	16,950	840	16,110	1,611	14,499	2,977	2,369	2,369
E	9,500	5,910	15,410	760	14,650	1,465	13,185	2,582	2,061	2,061
F	7,500	4,850	12,350	600	11,750	1,175	10,575	1,866	1,486	1,486
G	8,500	5,380	13,880	680	13,200	1,320	11,880	2,224	1,756	1,756
H	6,000	3,760	9,760	480	9,280	928	8,352	1,324	1,046	1,046
I	5,500	3,205	8,705	440	8,265	826	8,439	1,116	865	865
J	5,500	3,205	8,705	440	8,265	826	8,439	1,116	865	865
Corporation										1,720
Totals	\$86,000	\$53,750	\$139,750	\$6,880	\$132,870	\$13,286	\$119,584	\$22,983	\$20,776	\$19,936

TABLE II. Case D:

AMOUNT FOR EACH: ARCHITECTURAL PROPRIETORSHIP AND PRODUCTION CORPORATION								FEDERAL INCOME TAX Total
Person 1	Salary 2	Profit 3	Income 4	Reserved 5	Balance 6	Retirem't 7	Withdrawn 8	9
A	\$ 6,000	\$15,325	\$21,325	\$ 480	\$20,845	\$2,085	\$18,760	\$12,580
B	5,500	1,750	7,250	480	6,810	681	6,129	1,844
C	5,000	1,612	6,612	400	6,212	621	5,591	1,606
D	5,250	1,612	6,862	420	6,442	645	5,797	1,689
E	4,750	1,477	6,227	380	5,847	585	5,262	1,476
F	3,750	1,212	4,962	300	4,662	466	4,196	1,054
G	4,250	1,345	5,595	340	5,255	525	4,730	1,265
H	3,000	940	3,940	240	3,700	370	3,330	719
I	2,750	801	3,551	220	3,331	333	2,998	599
J	2,750	801	3,551	220	3,331	333	2,998	599
Corporation								860
Totals	\$43,000	\$26,875	\$69,875	\$3,440	\$66,435	\$6,644	\$59,791	\$24,291

Now let us suppose that Mr. A decides that he will continue to carry the entire legal responsibility for the organization a few years longer. Since he would be required to assume all possible losses, he will retain 50% of profits, but will distribute 50%* to the others as bonuses in proportion to their salaries. For Table II, on this page, it is assumed that Mr. A sets up a proprietorship for architectural practice and a corporation for the production of contract documents. All salaries are divided between the two units in accordance with time card data, but for this study, it is assumed that salaries are the same for each division. In Column 2 are the salary amounts allotted to each unit. Fifty per cent of distributed profits are assumed to be from the proprietorship and fifty per cent from the corporation. The amounts from each are given in Column 3, and the total income of each individual under this plan is given in Column 4. The amounts reserved out of profits of each organization before distribution are given in Column 5, and the income after reserves for each individual are given in Column 6. Ten per cent of each of these balances is to be paid into a retirement plan as indicated in Column 7, and remainders to be withdrawn by each are given in Column 8. The Federal income tax to be paid by each person on his income from the proprietorship and the corporation are given in Column 9. As an employee of the corporation, Mr. A may deduct his payments under the retirement plan.

The total of Federal income taxes under each

of the plans are as follows:

Total Taxes	Amount	Differential
1. Case C, Corporation,—	\$19,936	—
2. Case B, Proprietorship,—	\$20,776	—\$ 840
3. Case A, Partnership,—	\$22,983	—\$2,207
4. Case D, Prop. and Corp.,—	\$24,291	—\$1,308
Case C—Case D,		\$4,355

Income After Taxes is given in the table below for each individual:

Person	Corporation Case C	Proprietorship Case B	Partnership Case A	Prop. and Corp. Case D
A	\$13,807	\$19,985	\$15,864	\$30,465*
B	12,827	12,827	14,740	10,414
C	11,813	11,813	13,608	9,576
D	12,130	12,130	13,973	9,905
E	11,124	11,124	12,828	9,048
F	9,089	9,089	10,484	7,338
G	10,124	10,124	11,656	8,195
H	7,306	7,306	8,436	5,941
I	6,574	6,574	7,589	5,397
J	6,574	6,574	7,589	5,397
Corporation	5,160			2,580

* Many profit sharing plans distribute smaller ratios of the profits.

* If the income of the corporation is added to that of Mr. A, his income after taxes becomes \$18,967 under Case C and \$33,045 under Case D.

The incomes of everyone except A look good under Case A, the partnership, because they share in the accumulated reserves.

Expendable Income for each individual under each plan is given below:

Person	Corporation Case C	Proprietorship Case B	Partnership Case A	Prop. & Corp. Case D
A	\$13,807*	\$11,247	\$13,046	\$24,940
B	12,827	12,827	12,148	10,414
C	11,813	11,813	11,243	9,576
D	12,130	12,130	11,522	9,905
E	11,124	11,124	10,603	9,048
F	9,089	9,089	8,709	7,338
G	10,124	10,124	9,656	8,195
H	7,306	7,306	7,028	5,941
I	6,574	6,574	6,323	5,397
J	6,574	6,574	6,323	5,397
Corporation	5,160			2,580

While the tax levied against the entire personnel of the office, organized as a corporation, is only about 4% less than as a proprietorship, the tax advantage of the proprietorship over the partnership is around 10%. The company divided into a proprietorship and a corporation pays between 5% and 6% more tax than the partnership and nearly 22% more than the single corporate organization.

The combination proprietorship and corporation is advantageous for Mr. A and disadvantageous for the others because of the smaller proportion of profits distributed to the others.

The totals for the office, of income after taxes and expendable income for each of the plans, are given below.

Some advantage might result from the establishment of a second corporation, wholly owned by Mr. A, for the purpose of providing building space. It would be most advantageous if heating, air conditioning, lighting, furniture and equipment, and landscaping and its maintenance were provided by this corporation. Rent would be paid to this corporation by the proprietorship and the other corporation out of allowances for indirect expense. Any profits from operating this plant would be taxable at 25%, but probably would not be subject to the corporation surtax. If, instead of setting up a building corporation, the plant were provided by either the architectural proprietorship or the corporation for production, the operation of the plant might result in a decrease in total expense (equal to a part of the rent being paid), and an increase in taxable profits. The resulting increase in taxes would probably be larger than the amount of taxes on the profits of the building corporation. Expenditures for plant are sometimes influenced by a desire to justify high accumulated reserves. It should not be surmised that the relative desirability, tax-wise, of the differ-

* Including the income of the corporation, Mr. A's total income becomes \$18,967 under Case C and \$27,520 under Case D.

FIGURE 1

	Corporation Case C	Proprietor Case B	Partnership Case A	Split Case D
Expendable	\$106,528	\$ 98,808	\$ 96,601	\$ 98,731
Plus Retirement		1,858 ^(a)	13,286	2,085 ^(a)
Plus Reserved		6,880	6,880	3,440 ^(b)
After Taxes	\$106,528	\$107,546	\$116,767	\$104,256
Plus Taxes	19,936	20,776	22,983	24,291
Total	\$126,464	\$128,322	\$139,750	\$128,547
Plus Retirement	13,286	11,428 ^(c)		11,203 ^(c)
Total	\$139,750	\$139,750	\$139,750	\$139,750
Less Taxes	19,936	20,776	22,983	24,291
Balance ^(d)	\$119,814	\$118,974	\$116,767	\$115,459
Less Restricted ^(e)	20,166	20,166	20,166	20,166
Balance ^(f)	\$ 99,648	\$ 98,808	\$ 96,601	\$ 95,293

^(a) Retirement payment of the proprietor only; payments of the others are in (c) and (d) below.

^(b) Amount reserved for the proprietorship only; reserves for the corporation are included in expendable income. However, Mr. A. can not withdraw his share of reserves without paying additional tax.

^(c) Retirement payments of employees.

^(d) Amount of total income after payment of taxes.

^(e) Sum of amounts set aside for retirement and amounts reserved.

^(f) Amount intended for unrestricted use by individuals and corporation.

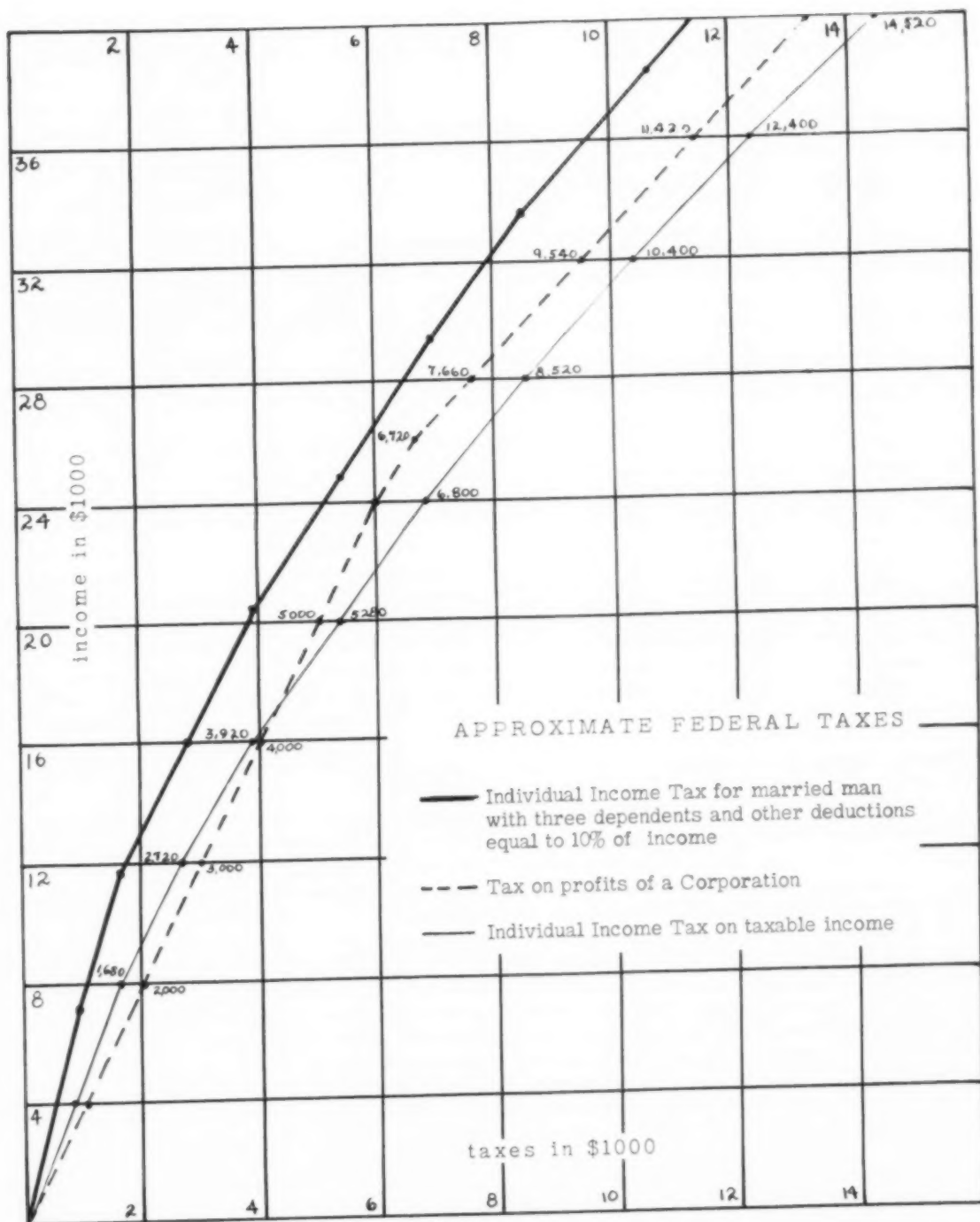


FIGURE 2

ent types of offices is always as shown by these studies. The answer for each situation, however, may be indicated by some such studies as those reported herein.

Figures 1 and 2 indicate the approximate amounts of Federal income taxes payable on incomes up to \$150,000 (1) by a proprietor with three dependents (4 exemptions) and with other itemized

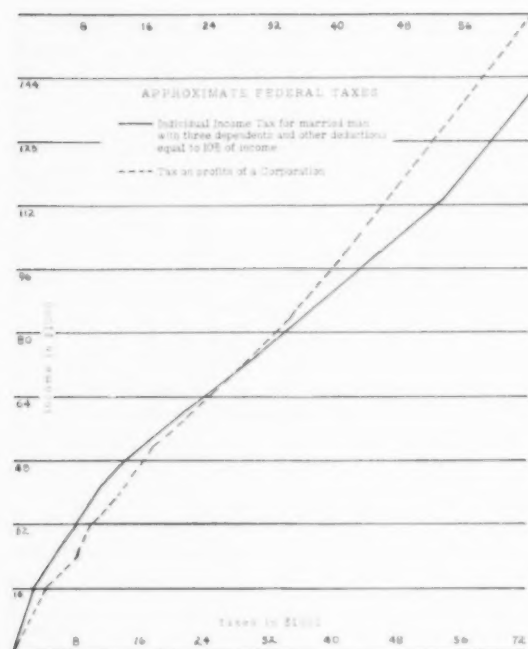


FIG. 3

deductions equal to 10% of income, and (2) by the sole owner of a corporation who serves without

salary. Read horizontally from the figures for income at the left until the proper curve is intercepted, then read vertically to the bottom where the amount of tax is given. Sample results are given below in terms of total tax liability:

Income in \$1000	Propri- etorship	Corporation paying Salaries		
		0	\$10,000	\$20,000
10	\$1,372	\$2,500	\$1,372	—
20	3,800	5,000	3,872	\$3,800
30	7,058	8,600	6,372	6,300
60	21,244	22,700	19,372	17,100
70	26,812	27,400	24,072	21,800

In considering the relative desirability for professions of corporate organizations as against proprietorships or partnerships, ethical and public relations aspects should be heavily emphasized.

In weighing the desirability for architectural practice of a corporate organization as against that of a proprietorship or a partnership, the attitude of members of the profession and of the public, and the effect upon the individual architect's relations with his clients should be given first consideration.

Ten Commandments

1. Thou shalt not say, "All's wrong, I'm right,"
Unless thy name is Frank Lloyd Wright.
2. Thou shalt not deify one style,
Dismissing others with a smile.
3. Close not thine eyes, look everywhere.
Close not thy mind, save for repair.
4. Thou shalt not parrot scorn of art,
Thou who of art shouldst be a part.
5. Yet think not thou, "Vile Costs I hate!"
For thus, thou fool, thou wilt lose weight.
6. To engineers thou shalt be kind.
They have the engineering mind.
7. Go and do likewise to contractors.
Thou the director, they the actors.
8. Thou shalt not plan a cold neat shelter
For those who love an old sweet welter.
9. Nor say, "You know not what you do"
To clients (though it may be true).
10. A little wine thou must needs take
For stomach and for reason's sake.

ELISE JERARD



LIFE IN A MARTINI GLASS:

FINALLY, HERE IS SPRING. The first ball has been pitched and the first umpire baited.

Baseball is for the mathematical mind, and architects and artists have neglected our great National pastime, without much reason. One not only gets a remarkable performance of timing but also the best ballet devised by man and now enjoyed only by undeserving masses who would not interrupt their slow train of thought to consider and ponder the beauties of the play at second, the movement of the outfielder silhouetted against the wall killing off a certain double or that charming composition of the batter mouthing the ump for calling the third strike.

Consider the Sunday painter. He goeth forth, laden with a backful of equipment only to immortalize a bird, tree, or flower, while here, in the cool comfort of the evening, under the great invention, the night lights, baseball presents beautiful compositions. The grass is green enough now for Chagall, the night air clear as Manet, Monet or Jacquet. The crowd in masculine colored shirts is a scintillating mosaic, and there is enough movement of figures to satisfy the most critical. So fear not the social strata which vents its feelings in corrupted prose. Their bellowing is as sweet as the Opera. Voilà, monsieurs and madames, emerge from the dusty cocktails and teas of the vernissage or the gallery openings. Come, enjoy the dogs hot, the paper-bound orange juice and the palette of your desegregate fellow man.

Like when we were in Florence, Italy, a sign was posted noting a baseball game on Sunday at the

Mussolini Stadium with the Nettuno Fishcakes playing the Firenze Redcaps. We decided that we would like to see baseball in Italy, with Italian teams, and on Sunday we drove to the Stadium. It is a large Nervi amphitheatre devoted mainly to soccer, and seats or stands 100,000 people. It was a nice hot afternoon for baseball. Outside of the stadium were two spumone carts, two people selling programs, two people selling hot dogs, four empty motorcycles and ourselves. We went to the grandstand entrance and bought the best seats in the house and went in. The great Mussolini stadium was yawning, ready for one hundred thousand people, but attending the national pastime of the Americans were only about a hundred people sitting and chewing on peanuts and yelling. On a piece of the soccer field they had laid out a baseball diamond, using old-fashioned tennis tapes which we used to trip over as kids in America, and there was a modern wire-cage backstop. The two teams looking almost like American baseball players complete with uniforms were batting fungus around the infield and in general comporting themselves like the movies of eighteen Di Maggios.

Finally, about an hour after the time scheduled, a gentleman walked out who was dressed like an umpire and in addition to his regular equipment, wore a pair of football shoulder pads on the outside of his suit. He took his cap off, dusted the plate, threw his hands into the air and yelled "playa balla." The two teams ran in from the playing field and went to their respective benches.

At a signal from the coaches, the two teams ran out to home plate and lined up, and in single file the Nettuno Fishcakes ran down the first base line and across the infield to second base and waited there. Then the Firenze Redcaps ran down the third base line and out to second base line and waited. The team captains stepped out at second base, shook hands, went back to their respective teams and then the teams circled and each gave a yell for the other. Then they ran back to their dugouts.

The umpire came up to the home plate, dusted it off again and yelled "batter uppa." The Firenze Redcaps took the field. The first batter came up and the first ball pitched, he chopped it down the third base line. The third baseman, the shortstop, the pitcher, and the umpire all ran it down, and by the time everybody had fumbled and kicked the ball around, the man was safe on second base. The next

man up was thrown a strike and the umpire yelled "strika oneaa." The second ball was hit over the second baseman's head into short center field, and when the second baseman, the center fielder, the shortstop, and the third baseman got around to fielding it, the man on second had scored and the batter was standing safely on third. At the end of the first half of the inning, we left. The Nettuno Fishcakes were then ahead 8 to 0 and it was getting hotter. Weeks later we were in Tuniso watching the Grandprix Horse Race being run on a hot Sunday afternoon. I spied an Officer in an American Army uniform, and I went up and talked to him. He turned out to be a representative of the American Battle Monuments Commission in charge of the work on the cemetery at Carthage. His assignment carried him to all the American Battle Monuments jobs and I said playfully, "Isn't there a monument at Nettuno which is a cemetery for the Anzio beach-head?" "Yes," he said, "there certainly is." I said, "Well, isn't that a little fish town and how can Nettuno get a baseball team playing American baseball so good as to run out enough hits in the first inning to be 8 to 0." His eyes brightened and he said "Did you see the Nettuno Fishcakes at work, and where were you at?" I said, "We saw them play in Firenze, Italy, and I didn't even know they played baseball in Italy."

He said, "Ah, the Nettuno Fishcakes; they are the outstanding team in the Italian League of baseball because they are coached by a man named McGarrity and the reason for all this baseball is that the Nettuno Fishcakes and all the other teams are grave diggers and flower planters from the American Battle Monuments Commission, and they are run by this Irishman named McGarrity and whenever there is an American Battle Monument, there also you will find a baseball team. McGarrity is trying to instill into the Italian mind the spirit of fair play and the National pastime of the American people." "Well," I said, "I thought it was a wonderful idea, and we had a fine time, and we hoped the Italian people would like baseball, but didn't anybody ever beat Nettuno?" He said, "Well only once, only once was Nettuno beaten by anybody, and that was the time they were playing Rome, and the Rome team had got tired of being beaten, so they borrowed a bunch of Jevvies from Holy Cross University who were studying in the American School in Rome, and put them in the Rome uniforms, and the Jevvies beat the hell out of Nettuno. McGarrity got so mad at the end of the game that he went out and punched the Umpire in the nose, and that was the first and last time that Nettuno has lost."

August Bendish

Ode to a Code

Oh, that I might do one thing
To rightly awe posterity
That I might make a poet sing
Of my designs in lyric stone
Temple, church, or anything
To make my genius known.

But well I know, though I design
A work of brilliant clarity,
My sons will think my work passe
And even though it glowed
It would soon be cleared away
By a changing building code.

Phidias had no iron to rust
Or built-up roofs to weather
No stress, no strain, nor scissors truss
And never wondered whether
Drains would clog, or pipes would bust
And ruin his reputation.
On second thought, that building code
Just might be my salvation.

HUBERTUS JUNIUS

Archcrostic, Jr.





FIG. 1. A TYPICAL CENTRAL NEW YORK STATE COBBLESTONE FARMHOUSE.

The Cobblestone Houses of Central New York State

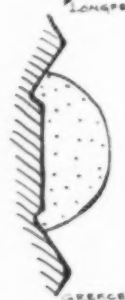
BY CARL F. SCHMIDT, *an architect of Scottsville, N. Y., who has spent his life studying the regional architecture of his area. He has written several books on the buildings of the region, and is just finishing one on octagonal houses.*

UNTIL ABOUT TWO DECADES AGO, cobblestone houses were accepted by up-state New Yorkers without much thought. That here developed a type of masonry wall of unique beauty and interest was never realized except by a few people. With a few exceptions, this type of masonry wall is not found elsewhere in our country. There are a number of cobblestone houses in Illinois, Wisconsin, Michigan and Ontario, Canada. In most localities, the first examples of these houses were erected by people who had migrated from the New York State cobblestone area.

Generally, we can say that Rochester is about the center of the cobblestone region. If we draw a circle, with a radius of about sixty miles, using Rochester as a center, we would include about ninety per cent of all the cobblestone buildings. (Fig. 1)

There is no particular secret regarding the construction of this type of masonry wall, using small stones laid in horizontal rows. Masons have used small stones to build walls for centuries. Some of these examples, particularly those in France, closely resemble the early cobblestone work in this area. Near Dieppe there are sections of the old city walls dating back to the fifteenth century that have similar stone masonry. Also in England there were walls built of small stones called "flint-heads," which could have been the source of inspiration.

The first cobblestone houses were built of field-stones dropped by the glaciers that once covered New York State. The stones were a great source of trouble to the pioneer farmers trying to plant and cultivate their fields. They were laboriously gathered and built into miles of dry stone-wall



SECTIONS THRU VARIOUS STONE COURSES

ONE



FIG. 2. A MASONRY WALL OF THE FIRST HALF OF THE EARLY PERIOD BUILT UP OF FIELDSTONES OF VARIOUS SHAPES, SIZES AND COLORS.

fences. Many tons were used in building foundation walls for houses and barns but these walls were built of various sized stones and small boulders and the face of the wall was flush.

Then, sometime between 1825 and 1830, some mason built a house using the smaller fieldstones about three to four inches high in regular horizontal courses. This idea spread very rapidly.

There are usually several factors which influence the development of a certain type of architecture or construction in a locality. This was true of cobblestone masonry. It was essential that the farmer clear his fields of stones because they interfered with the plowing and reaping. Children often helped to clear the fields of stones and they also sorted and sized the stones by dropping them through a hole cut in a board or through an iron ring called a "beetle ring."

In order to build the numerous cobblestone buildings many more masons were needed than are normally required. During the cobblestone period masons were plentiful in this locality because when the Erie Canal between Rochester and Buffalo was surveyed the engineers discovered that in many places it would be necessary to excavate the canal channel through sandstone beds. They decided to use these excavated sandstones to build the locks and bridge abutments. After construction started the contractors realized more masons were needed to complete the canal within the specified time and western New York could not supply them. Hence, they advertised for masons in New England and Pennsylvania. After the completion of the canal many of the imported masons, attracted by the fertile farmland and the business prospects created



FIG. 3. LATE EARLY PERIOD COBBLESTONE WORK USING MOSTLY SQUARISH FIELDSTONES.

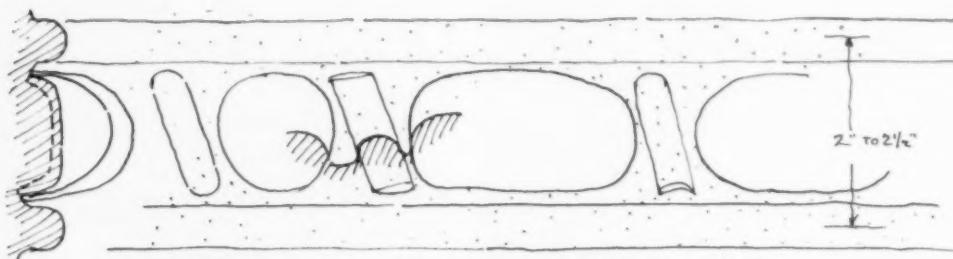
by the canal, made Western New York their home. Consequently, there were many more masons in proportion to the other building craftsmen and the masons needed work to supplement their farm income. The use of cobblestones as a building material supplied this need.

Paint was expensive at this time and cobblestone walls did not require any painting.

Architecture has always been in a process of development or decay. It never stands still. The same is true of cobblestone masonry and its development can easily be traced through the usual divisions of early, middle and late periods. The Early Period included the work done between 1825 and 1835. The Middle Period extended from 1835 to 1845 and the Late Period from 1845 to the end of the Civil War. The passing of the generation of masons that worked on the Erie Canal between Rochester and Buffalo and the increase in wages caused by the Civil War ended the era of cobblestone masonry.

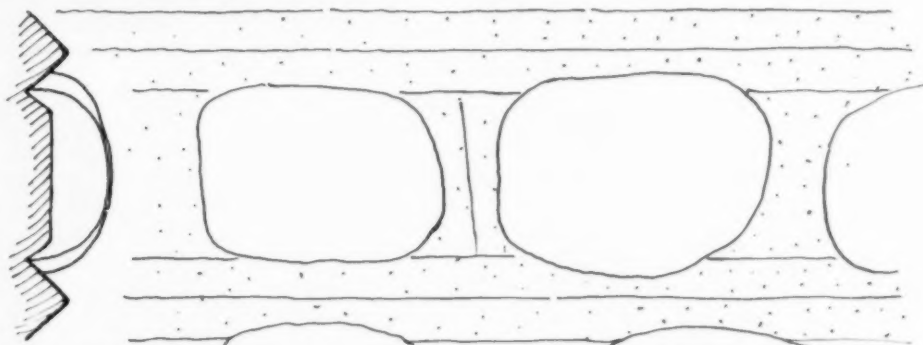
During the first half of the Early Period the masons used stones of various sizes and shapes as well as different colors, just as they were gathered from the fields. The exposed stones were from two and one-half to three inches high and from three to six inches long. A few stones eight to ten inches long are also found scattered in the wall. The horizontal mortar joint varied from one to one and one-half inches wide. It was a wavy, irregular line, formed by the mason holding his trowel at an angle when striking the joint. (Fig. 2)

This form of a V joint greatly appealed to the masons and it spread very rapidly. The sides of the V are pitched more sharply and it is made in a



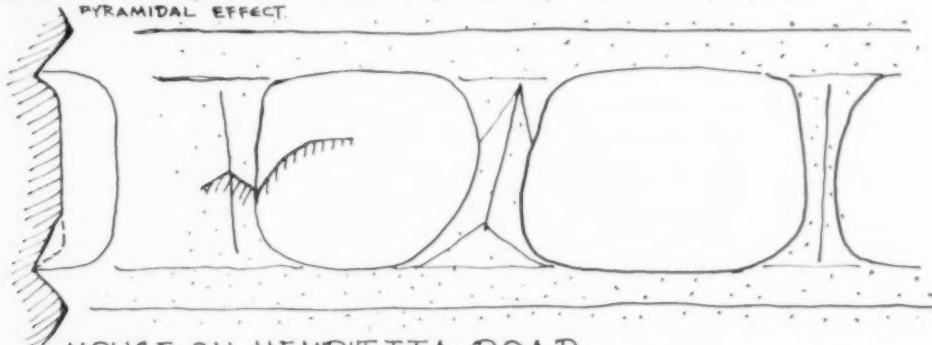
SECOND M.E. CHURCH IN PARMA, 1847

THE QUOINS ARE RED SANDSTONES, FAIRLY WELL SQUARED UP, WITH TOOL MARKS SHOWING. THE COBBLESTONES ARE OF THE ROUND WATER WASHED VARIETY, OF ALL COLORS, BUT RED SANDSTONES PREDOMINATE. THE COBBLESTONES ARE FROM $1\frac{1}{4}$ " TO $1\frac{1}{2}$ " HIGH AND FROM $1\frac{1}{2}$ " TO 5" LONG. THE TENDENCY WAS TO EMPHASIZE THE HORIZONTAL WITH LONG THIN STONES. THE MORTAR IS A FINE GRAIN OF A BROWNISH COLOR.



THE ABEL HOUSE, HENRIETTA ROAD

THE COBBLESTONE WORK IS VERY ROUGH, THE STONES ARE LARGE, OF THE FIELDSTONE VARIETY AND OF VARIOUS COLORS. THE STONES VARY FROM 2" TO $2\frac{3}{4}$ " HIGH AND FROM 2" TO 9" LONG. THE HORIZONTAL COURSES OF STONES AND JOINTS ARE VERY UNEVEN AND THE HORIZONTAL "V" JOINT WAS MADE WITH THE TROWEL AND IN PLACES IT HAS ENTIRELY WEATHERED AWAY. THE VERTICAL JOINTS ARE MOSTLY THE RESULT OF MORTAR HAVING BEEN SQUEEZED OUT WHEN THE STONES WERE BUTTED AGAINST EACH OTHER. A FEW ATTEMPTS WERE MADE TO GIVE A "V" OR PYRAMIDAL EFFECT.



HOUSE ON HENRIETTA ROAD

THE COBBLESTONES ARE OF THE ROUGH FIELDSTONE VARIETY, OF ALL COLORS AND SIZES. THE COURSES OF STONES AND THE JOINTS ARE VERY UNEVEN, AND OCCASIONALLY A STONE BREAKS COMPLETELY THROUGH THE JOINTS. THE STONES VARY FROM 2" TO $2\frac{3}{4}$ " HIGH AND FROM $2\frac{1}{4}$ " TO $7\frac{1}{2}$ " LONG. THE HORIZONTAL JOINT IS A "V" FORMED WITH A TROWEL AND VERY UNEVEN. THE VERTICAL JOINTS ARE OF EVERY TYPE, SOME "V" SHAPED, SOME PYRAMIDAL IN FORM, AND IN SOME PLACES THE STONES WERE JUST BUTTED TOGETHER WITH NO ATTEMPT MADE TO FINISH THE JOINTS.

TYPES OF COBBLESTONE MASONRY

C.B.

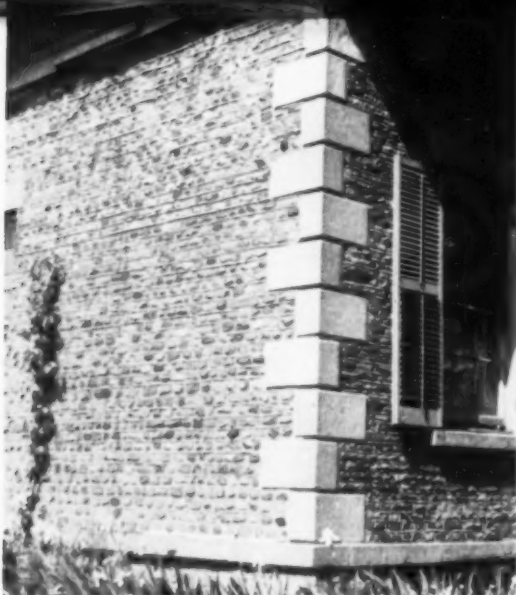


FIG. 4. AN EXAMPLE OF LATE MIDDLE PERIOD WORK. THE FRONT WALL IS LAID UP FIVE COURSES PER QUOIN HEIGHT AND FOR THE SIDE WALL THE MASON USED LARGER AND MORE IRREGULAR FIELDSTONES LAID FOUR COURSES PER QUOIN HEIGHT.

continuous line as straight and even as a trowel can form it. The V joint made the stones appear to project beyond the surface of the wall and in the sunlight each stone has a highlighted and shaded surface as well as a shadow. The effect of sunshine playing on such a wall made of various colored sandstones and granites is like the paintings of the early modernists, myraids of dabs of color that vibrate in the light.

During the latter half of the Early Period the masons became more careful in selecting stones of a more uniform size and laid them more evenly with straight horizontal mortar joints. They also began to embellish the vertical joints between the stones with a projecting V shape of mortar or building up a small pointed pyramidal shape. But this embellishment of the vertical joint was never permitted to touch or interfere with the continuous horizontal joint. The tendency throughout the cobblestone era was to use smaller and smaller stones and to reduce the width of the horizontal joint. (Fig. 3)

In the Middle Period the stones averaged from one and one-half to two and one-half inches high and from two to four inches long, and were more carefully selected for size and shape. About the late "thirties" the masons began to mix rounded water-washed stones with the fieldstones. These round or oval-shaped water-washed stones found in the gravel pits and along the shores of Lake Ontario had a certain fascination for the masons and they became the preferred material. At first the lake-washed stones were laid up in the walls of various colors from gray to dark red. Then it became fashionable to carefully select the stones all of the same color. Since red sandstone is abundant in this area,

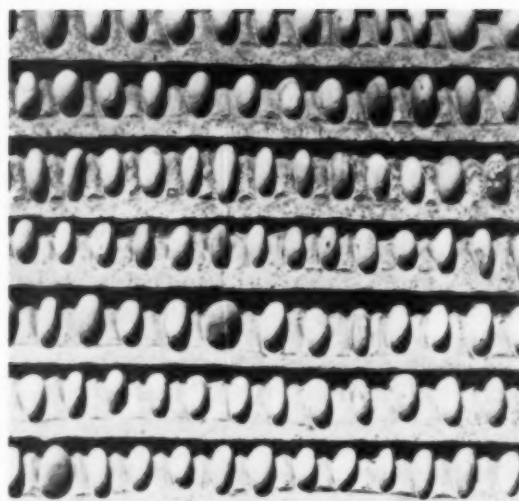


FIG. 5. A LATE MIDDLE PERIOD WALL LAID UP WITH THE OVAL SHAPED STONES, OF VARIOUS COLORS, SET VERTICALLY. DURING THIS PERIOD THE USE OF RED AND RED-BROWN STONES WAS FASHIONABLE.

most of the houses were built of various shades of red or red-brown stones. (Fig. 4)

The horizontal mortar joints were reduced in width, averaging about three-quarters to one inch wide. The horizontal V joints and the pyramidal embellishments between the vertical joints were carefully made with a small trowel. However, in the early "forties" some mason made a metal form that would strike a bead or half circle about one inch wide to form the joint and also used some form of straight-edge or guide to make a perfectly straight line. (Fig. 5)

During the Late Period the masons carefully selected lake-washed stones of the same color and size. The stones averaged from one inch to one and one-half inches high and the horizontal mortar joints, either a V shape or bead, were not more than three-quarters of an inch wide.

The appearance and character of the cobblestone wall had completely changed. In the Early Period the stones were actually an integral part of the wall, they were a part of the construction. In the Late Period the small cobblestones were merely a veneer applied against a structural stone wall. The small lake-washed stones had no structural feeling. The sparkle and life of the variegated colored walls disappeared because all the stones were of the same size and color. It has a monotonous, machine-made appearance. (Fig. 6) The beauty of the walls built of larger stones of various colors and shapes during the latter years of the Early Period and the first half of the Middle Period is apparent even in a photograph. These walls expressed a feeling for material rightly used and did not make a display of it as was done in the Late Period.

We divide the era into the three stages, as Early, Middle and Late to understand the process of its development. It simplifies teaching, but we must realize that all craftsmen in an epoch do not follow these divisions. Some masons learned how to lay up cobblestone walls in the Early Period and continued to lay up this type of masonry in the Middle and Late Periods, as there were some carpenters who continued to run their own wood mouldings with moulding-planes long after woodworking shops were cutting mouldings by machine. There are houses built as late as 1846 in which the cobblestones are laid in the Early Period manner. But we do know that a cobblestone wall built of rounded water-washed stones was not built before the latter half of the Middle Period, and that a wall of small lake-washed stones, all of the same color was not built before the Late Period.

It was during the Middle Period when craftsmanship and skill were nearly balanced that the best work was done. The masons vied with each other in experimenting with new methods and patterns of laying the cobblestones. Some selected only squarish stones, other oval shapes. The oval shapes were set in the wall vertically, or diagonally, sloping the stones to the right or left. Herringbone patterns were common using thin oval-shaped stones from three to six inches long and from three-quarters to one inch thick. (Fig. 7)

In Sodus and Alton a mason built up his walls by using some white cobblestones. In one house he laid up the front wall with five courses of red lake-washed stones and a course of white lake-washed stones and the stones were graded from large stones at the grade to small stones in the peak of the gable. In another he built the front wall with alternating bands of red and white stones. Each band consisted of two courses of stones. In the church near Alton the front wall was built of alternating bands of red and white stones and each band consisted of four courses of stone.

In and near Childs there are a number of houses, no doubt the work of one man or group of men who did not like the idea of emphasizing the horizontal mortar joint. The cobblestones were laid in horizontal rows but a concave depression was formed around each stone to make it project. A pattern very similar to this, but larger in scale, is to be seen in parts of the basement walls of Chartres Cathedral. The result is an all-over pattern with highlights and shadows on each stone as well as in the depressions surrounding the stones.

During the first half of the Early Period the walls were built as stone walls of this type had been built for centuries. The walls, about eighteen or

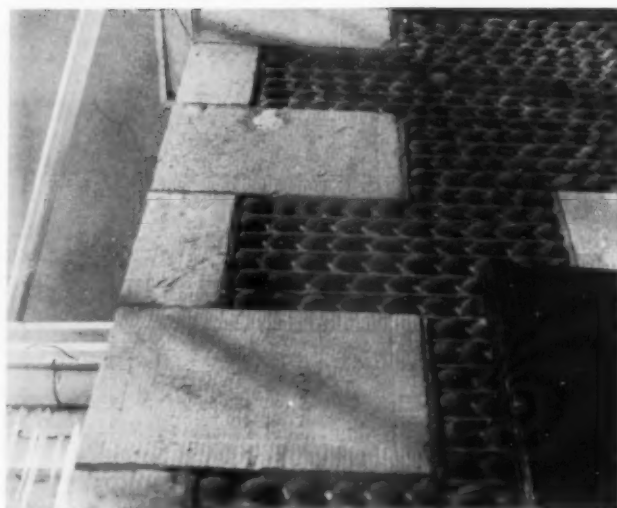


FIG. 6. LAKE-WASHED STONES OF THE LATE PERIOD, CAREFULLY SELECTED FOR COLOR. NOTE THE PROJECTION OF THE COBBLESTONES, AND THE TOOLING OF THE QUOINS.

FIG. 7. A LARGE-SCALE HERRINGBONE PATTERN OF THE LATE MIDDLE PERIOD. STONES ARE FOUR AND ONE-HALF TO SIX INCHES LONG.



twenty inches thick, were built of three rows of field-stones, the middle stones breaking the joints. The wall was frequently tied together with elongated stones, three or four inches in diameter, and ten to eighteen inches long, with the small ends exposed. Triangular shaped stones with one end exposed were also built into the wall. Large stones, six to twelve inches thick and twelve to twenty inches long were built into the inner two-thirds of the wall. The entire thickness of the wall was carried up at the same time and the wall had a sound structural appearance.

However, when the masons began to select smaller and smaller stones to form the horizontal courses, the cobblestones in the face of the wall assume the character of a veneer or facing.

One method of building the veneer or facing was as follows: The inner structural stone wall was built up several feet or more in advance of the facing. A wood framework was built up on the outside of the wall and a plank set up horizontally on

the frame in line with the proposed course of cobblestones. The plank was the same thickness as the height of the cobblestones, and the stones were laid up so that the outside edge of the stones just touched the plank. It kept the outside edge of the stones in perfect alignment vertically and horizontally. A metal tool, either a V shape or a bead, was used to strike the bottom horizontal joint, using the bottom of the plank as a guide. After a course of stones was laid the length of one side of the house the plank was raised to lay the next one.

There were, do doubt, other methods used by the various masons, but they were never recorded and are completely lost. We do know that some masons made every effort to keep their particular method a secret, although there is no particular secret in laying such a wall that present-day masons could not soon learn, and they would most likely re-discover the various methods used by the cobblestone masons.

CALENDAR

May 5-10: Third Congress of the International Federation on Pre-stressing, Berlin, Germany.

May 8-9: AIA Committee on Hospitals and Health, Mayo Clinic, Rochester, Minn.

May 14-17: British Architects Conference. Newcastle-on-Tyne, England.

May 18-21: American Institute of Decorators' 27th Annual Conference, Sheraton-Plaza Hotel, Boston, Mass.

May 19-23: 62nd Annual Meeting of National Fire Protection Association, Palmer House, Chicago, Ill.

May 29-June 9: First World Assembly of Engineers and Architects, Friends of Israel, sponsored by the Technion-Israel Institute of Technology and the Association of Engineers and Architects in Israel, Haifa, Tel Aviv, and Jerusalem.

May 31-June 8: Second Congress of European Federation on Corrosion. Frankfurt, Germany.

June 11-14: Annual Assembly of The Royal Architectural Institute of Canada, Ottawa, Canada.

June 11-14: Annual meeting of the National Society of Professional Engineers. Chase-Park Plaza Hotel,

St. Louis, Mo.

June 20-22: National Congress on Building, Aix-les-Bains, France.

June 22-27: Annual Meeting, American Society for Testing Materials, Hotel Statler, Boston, Mass.

July 6-7: National Council of Architectural Registration Boards Convention, Hotel Cleveland, Cleveland, Ohio.

July 7-11: AIA Convention, Hotel Cleveland, Cleveland, O.

July 13-August 23: Ninth Annual Design Workshop, Instituto Tecnológico de Monterrey, Mexico.

July 20-28: Fifth Congress of the International Union of Architects, Moscow, Russia.

August: International Federation of Landscape Architects, Washington, D. C.

August 31-Sept. 6: Twenty-fourth Congress of the International Federation on Housing and City Planning, Liege, Belgium.

September: Seminar on Regional Planning—Development of Cities and Industries, Tokyo, Japan.

September 25-27: Seventh Annual Conference, Western Mountain District, Continental-Denver Hotel, Denver, Colo.

October 2-4: North Central Regional Conference, St. Paul, Minn.

October 8-10: Gulf States Regional Conference, Biloxi, Miss.

October 9-11: Annual Forum, Pennsylvania Society of Architects, Galen Hall, Wernersville, Pa.

October 9-12: Northwest Regional Conference, Harrison Hot Springs, British Columbia, Canada.

October 15: New York District Regional Conference, Rochester, N. Y.

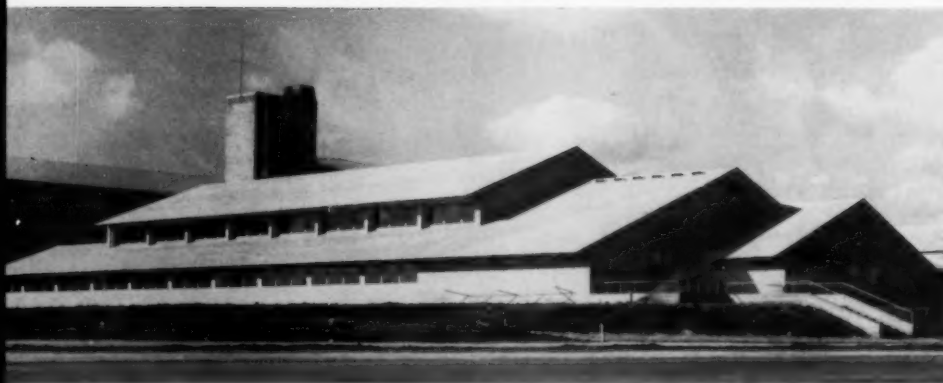
October 15-19: California Council, AIA, annual convention, Monterey, Calif. California-Nevada-Hawaii Regional Conference will be held as a part of this convention and will meet on October 17.

Mid-October: Western Mountain District Regional Conference, Denver, Colo. Date to be established.

October 22-24: Architects Society of Ohio, 25th Annual Convention, Sheraton-Gibson Hotel, Cincinnati.

October 30-November 1: Central States Regional Conference, Kansas City, Mo.

October 31-Nov. 2: Annual meeting of the National Trust for Historic Preservation, Roosevelt Hotel, New Orleans, La.



1.



Contemporary Danish Architecture

A comprehensive exhibition of post-war Danish architecture will be shown at the Octagon during May. Organized by the Federation of Danish Architects in Copenhagen, the exhibition is sponsored in this country by the Ambassador of Denmark, who will open the AIA showing.

1. A grade school in the "Voldparken" area of Copenhagen. The school was designed by Kay Fisker. The building houses both an elementary and a high school. The elementary school is one-storied with each classroom opening on to the garden. 2. A one-family house located in the suburbs of Copenhagen. The house was designed by Karen and Ebbe Clemmensen for themselves and is built of light concrete panels with a few oil painted squares and asphalt roofing.

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4.



5.



2.

3.



3. The Maternity Aid Institute, designed by Kay Fisker, in Copenhagen.

4. A one-family house with the living room opening on to the garden. The house was built in Gentofte, near Copenhagen, and designed by Eva and Niles Koppel. 5. Units of two and a half room apartments designed by Kay Fisker in Husum, a suburb of Copenhagen. The buildings are constructed of yellow brick and have gray cement sheeting on the roof and balconies. The window woodwork is painted dark. 6. A grade school designed by Arne Jacobsen. The building is divided into sections, each consisting of two classrooms, and a little yard. Each yard is different in character, both as to planting and sculpture. Arne Jacobsen also designed the gardens and has placed various pieces of sculpture in the yards.



6.



Architecture for the Department of State

AN EXHIBITION OF RECENT OVERSEAS PROJECTS designed for the Office of Foreign Buildings, Department of State, was opened with a reception at The Octagon for over two hundred leaders in government, society, the arts and members of the Diplomatic Corps.

This was the third such exhibition loaned to the Institute by the Department since 1954 and provided a current report on the government's extensive program of contemporary architecture abroad.

Guests of the Institute saw plans, perspective renderings, and models of the new projects—embassies and consulate general office buildings, ambassador's residences and staff housing. The trend toward utilization of the ripple roof was noted particularly in the Office Building and Residence at Rabat, Morocco, designed by Ketcham, Giná and Sharp; and in the Embassy Residence in Tehran,

LEFT TO RIGHT, SENATOR RALPH FLANDERS OF VERMONT, MRS. ROBERT LOW BACON, AND EXECUTIVE DIRECTOR EDMUND R. PURVES AT THE OPENING OF THE EXHIBITION.



HIS EXCELLENCY THE AMBASSADOR OF THAILAND AND MRS. ALICE GRAEME KORFF, EXAMINE A PHOTOGRAPH OF THE NEW EMBASSY OFFICE BUILDING TO BE BUILT IN BANGKOK. THE BUILDING WAS DESIGNED BY JOHN CARL WARNECKE.

Iran, designed by Victorine and Samuel F. Homsey. A feature of a number of the exhibits was the use of the grille or screen as in the well-known Embassy Residence in New Delhi, India, designed by Edward D. Stone.

It was perhaps the most effective exhibition yet arranged by Mrs. Alice Graeme Korff, Curator of the Gallery, displaying not only plans and renderings, and in some instances samples of building materials. Another interesting feature of the exhibition was the display of interior designs. Samples of fabrics and furniture, both in the traditional and contemporary styles were prepared by the Depart-



GUESTS OF THE INSTITUTE AT THE OPENING OF AN EXHIBITION OF RECENT OVERSEAS PROJECTS DESIGNED FOR THE OFFICE OF FOREIGN BUILDINGS, DEPARTMENT OF STATE.

ment of State to suggest treatment of typical rooms.

Also on display was the Citation of Honor which was conferred on the Office of Foreign Buildings by the Institute at the Centennial Convention last year. The Institute is particularly glad to show these current designs and to have the opportunity further to honor the outstanding achievements of this office.

A rotating Architectural Advisory Panel for the Office of Foreign Buildings has continued to give able assistance in the development of the foreign building program, now under the direction of William P. Hughes. Members of the present panel are: Chairman, the Hon. Joseph C. Satterthwaite, Director General of the Foreign Service; Edgar L. Williams, FAIA, Eero Saarinen, FAIA, and Richard M. Bennett, Jr., FAIA.

The spirit of the foreign buildings program was captured by Pietro Belluschi, Dean of the School of Architecture and Planning at Massachusetts Institute of Technology and a former member of the Advisory Panel, in his notes attached to the Department's statement of architectural policy. "To the sensitive designer," Mr. Belluschi wrote, "it will be an invitation to give serious study to local customs and people, and to grasp the historical meaning of the particular environment in which the new building must be set. He will do so with a free mind without being dictated by obsolete or sterile formulae or clichés, be they old or new; he will avoid being

either bizarre or fashionable, yet he will not fear using new techniques or new materials should these constitute real advance in architectural thinking.

"It is hoped that the selected architects will think of style not in its narrower meaning but as a quality to be imparted to the building, a quality reflecting deep understanding of conditions and people. His directness and freshness of approach will thus have a distinguished American flavor."

Among the distinguished visitors at the opening of the exhibition were Mrs. N. A. Robertson, wife of the Canadian Ambassador; Mr. Richard Howland, President of the National Trust for Historic Preservation; former Chief of Protocol and Mrs. John Farr Simmons; The Ambassador of Thailand; Madame Tran Van Chuong, wife of the Ambassador of Vietnam; Senator Ralph Flanders of Vermont; Deputy Undersecretary of State and Mrs. Loy Henderson; Congressman and Mrs. Brooks Hays of Arkansas; Mr. and Mrs. Douglas Whitlock; Secretary of the Smithsonian Institution and Mrs. Leonard Carmichael; The Ambassador of Finland and Madame Nykopp; Mrs. Robert Low Bacon; the former Ambassador to Norway and Mrs. L. Corrin Strong; Mrs. Wendell Willkie; Deputy Assistant Secretary of State and Mrs. J. Burke Wilkinson; and Deputy Assistant Secretary of State Robert Newbegin.

Following the opening reception, this outstanding exhibition was opened to the public and will remain on view at The Octagon through April 20th.

SHARP FOCUS

IN THE MINDS OF MOST ARCHITECTS "prefabrication" is a dirty word. Perhaps it would be good for the profession and in the public interest to get a new perspective on the meaning of prefabrication.

The middle of China thirty years ago provides a station point and datum equivalent to two or three centuries of Western evolution.

When this observer practiced in the Yangtze Valley in the middle twenties, standard operating procedure was that the carpenters and masons built themselves small mat-shed workshops on the site. Logs and poles were brought to the site, sawyers came and sawed boards of varying thickness for panels and flooring. Door and window frames, stiles and sash had been detailed to be cut with hand tools from fir poles of 3, 4 or 5 inch butt diameter. Applying basic engineering formulas, tables were calculated for tapered poles used as floor joists. The only off-site labor was represented by bricks, roofing tiles, some wire and a few electric light sockets, not more than 15% of the total man-hours. Here was almost complete absence of prefabrication, compared to which a conventional building in this country represents probably 75% of off-site man-hours.

Since the Crystal Palace of 1846, prefabrication has been an established, essential fact in the building industry.

If we avoid the man-on-the-street concept of "prefab" as meaning stock-plan houses in large room-size panels shipped on a truck and bolted together at the site, and realize that there has been an inevitable steady increase in the size, quantity and variety of building components made in factories and assembled in the building, we can take a constructive professional attitude toward prefabrication.

The home-builders and the manufacturers of stock prefab houses are getting together, enlarging somewhat the essentially limited market for the isolated prefab house. The metal prefab factory manufacturers who in recent years have tried to sell whole schoolroom units have learned the hard way, and are now turning to the design and production of building components, easier to mass-produce, inventory, sell and ship, permitting plan flexibility and a wider market.

The building industry, behind the procession, is moving along necessarily and inevitably toward industrialization. Whatever the degree of prefabrication, the role of the architect remains: To design structures for optimum human use, with control of the components by design or selection.

There will always be some clients requiring complete custom design, and parts of buildings requiring special detailing, but if our 19th century attitude of resistance to the machine and mass-production and romantic fondness for hand craftsmanship prevails, the designing of the components and ultimately of the whole building will be done either by the manufacturers' engineers focussing on the economical process, or by industrial designers slick-styling to please the advertising and sales managers. The losers will be the public, and the architectural profession.

The proper role, and the salvation, of the profession, is to not only accept prefabrication of more and larger building components, but also to get in there and design the components so that the public may have buildings which are good as well as economical.

W. A. T.

Recommended Reading

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THE LAST WEEK in March was a big week for architects in the magazine world. Of course, everybody saw American architecture's new pin-up boy, Ed Stone, on the cover of *Time* for March 31st, with a long story of his whole career, with four pages of color photographs, a half-dozen black and white pictures, and a thirteen-column story. It was a beautiful job, and good reading for architect and layman alike.

The Saturday Evening Post for

March 29th had a story about Royal Barry Wills—his career, his views on modern vs. traditional, and pictures. Another good job of presenting the architect to the public.

Fortune terminates its series on the US metropolis in its April issue with an article by Jane Jacobs entitled "Downtown is for People," pointing out the need for human scale in the planning of outdoor spaces. The editor brought over from England, two of the authors of

the *Architectural Review's* series, "Outrage" and "Counter-Attack," to make sketches of and comments upon aspects of the American cityscape. This entire series of articles has been of tremendous value, and it is to be hoped that its impact on the cities of the US will soon be felt.

THE DECEMBER 1957 issue of *Interiors* is rather far back by now, but we find that we omitted to mention an excellent section on churches—well worth turning back to.

Public Relations — capitalize on your conventions

This is the last of a series of articles by ROBERT R. DENNY

POPULAR BELIEF HAS IT that there are seven lively arts. In the lexicon of the North Carolina Chapter of AIA, however, there are nineteen, and thereby hangs a tale.

When the North Carolina chapter evolved its 1958 Winter Session program, it had two basic concepts in mind. Program chairman Robert Arey reports:

"First, it was our purpose to re-awaken in the minds of the member architects that architecture is one of the primary arts; second, to show off Winston-Salem proper with specific emphasis on the tremendously active arts programs in the community. From these two basic concepts evolved a program which represented or demonstrated nearly every art form . . .

"Regardless of the activity, each presentation was approached with an eye toward its esthetic effects. The idea of providing entertainment for sheer entertainment's sake was abandoned, and in its place was inserted the idea that anything esthetically well done, whether humorous or serious, would be entertaining and appreciated. We made no effort to gauge the level of the audience but each contributing artist was asked to deliver off the top of the bottle and undiluted."

Thus, the session program carried this impressive listing of those interests to be explored:

"Art of Architecture, Art of Linear Art, Art of Painted Art, Art of Graphics, Art of Sculpture, Art

of Liturgical Music, Art of Secular Music, Art of Classical Music, Art of Contemporary Music, Art of Cinema, Art of Photography, Art of Literature, Art of Drama, Art of Religion, Art of Dance Form, Art of Conversation, Art of Couturier Modes and Manners, Art of Horticulture, Art of Culinary."

Mr. Arey declares that "the effects of this convention are still being felt. For weeks after, many architects in Winston-Salem were complimented by friends and the lay public on the convention's success . . . The contributing artists and art groups themselves have a better awareness of architects in general. Public relations is a long-range and continuing effort. It was relatively easy to secure the donated services of many artists *because so many of the Winston-Salem architects are actively participating in all cultural and civic endeavors in the community.*"

It is interesting to note that, despite the fact that the North Carolina architects made no compromise with what they conceived to be the appropriate standards of subject or presentation for their members, they reaped a generous harvest of publicity. A great deal of it, it should be added, was interlaced with the type of information which educates the public on the architect and the aims of his profession.

For example, President Leon Chatelain, who was the banquet speaker and was interviewed upon his arrival by the *Winston-Salem Journal*, was given

the opportunity to explain for newspaper readers the meaning of contemporary design, the approach utilized by the architect to evolve building design, and the sharp rise in the cost of building "mechanicals" over recent decades. Other articles paid tribute to the architect's preoccupation with continuing education and the relationship of his work to other forms of art.

Events scheduled for the architects' wives also were woven into the comprehensive theme, the "Oneness of the Arts." One newspaper story in the women's section of the newspaper quoted an address by Wilmington artist Claude Howell on the meaning of non-objective art and its relationship to the contemporary home. Even the usual fashion show was keyed to the "oneness" theme.

For support and cooperation, the North Carolina chapter looked to Winston-Salem's many active art groups; its churches; its three colleges; its brick, concrete products and stone manufacturers and representatives; its theatrical and musical organizations; and the R. J. Reynolds Tobacco company. In only one instance did the chapter have to import its talent; that instance involved the personnel of the American Ballet Theater of New York and its performance of Copland's "Billy the Kid."

"Since so many organizations, groups, agencies, colleges, and individuals were participating," Mr. Arey observes, "the newspaper, television, and radio were interested and gave the convention a tremendous amount of publicity, varying from front-page photographs and articles to personal interviews, feature stories, and normal news coverage."

The obvious moral of the story is that a convention or meeting is an excellent springboard for publicity and community education if it is designed to provide news. It must be built into the convention program, however; it can't be grafted on as an afterthought. North Carolina took what we might call the "cultural" approach to its convention: it was, obviously, a very good one and reflected much credit upon the architects. It would be equally simple to evolve a theme on another subject. If community "A" has a school-building crisis, the AIA convention in that locality could work the problem into its theme and plan its activities and speeches accordingly. Should community "B" have a serious community redevelopment problem, a similar procedure and involvement could be followed. Community "C" might be undergoing a period of rapid industrial growth; here again, theme and format could be keyed to topical and local interest and problems.

In all these approaches, the explanation of the architect and his contribution is inherent. Once the

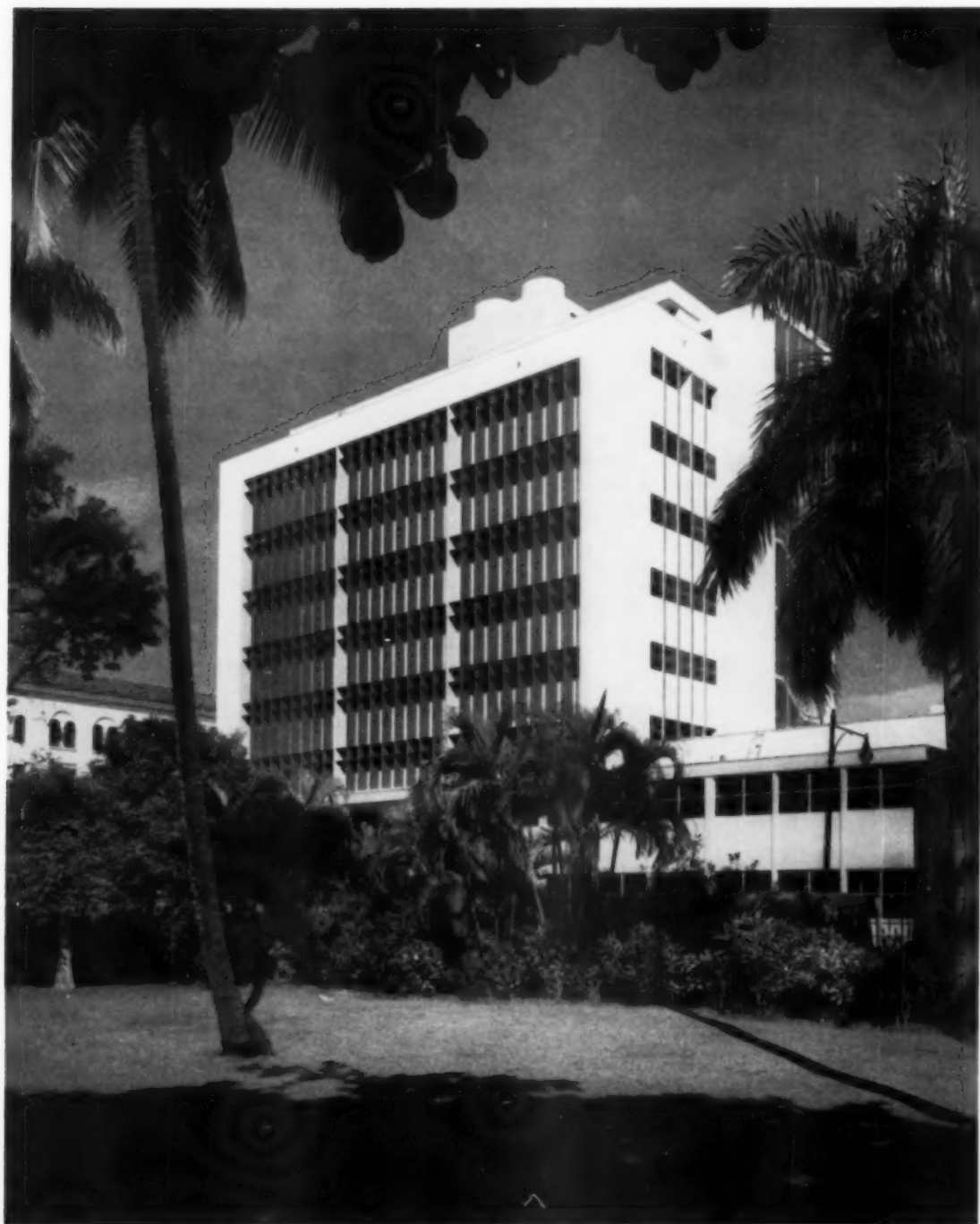
theme is worked out in respect to community interests and problems, the discussions are keyed back to architectural practice, and the speakers, visual displays and housekeeping are arranged, the rest is mechanics. Here, publicity techniques come into play—the matter of organizing press materials, assigning people to contact newspapers, radio, and television, making a schedule of story releases and radio-TV appearances by members, setting up interviews for incoming celebrities with something to say, etc. (Press relations were discussed in our *AIA Journal* article of December, 1957; radio and television, in the January, 1958 issue.)

As was seen in the North Carolina case-history, there need be no conflict between the interests of member architects and the organization of the program for purposes of public interest and enlightenment. Thus, it is neither necessary nor desirable to turn a convention into a side-show to attract public attention. The public is generally more intelligent than some of us prefer to believe. The man who thinks the public has a 16-year-old mentality invariably exempts himself from the group he derides. Others often do not.

This is not to say that the lay public will be interested in a technical session on efflorescence or the solar-gain expansion problems of metal panels. (Although, if the subject is properly presented, it may be.) Our point in bringing this up is to emphasize that a convention should be devoted to good public relations in its broad sense—the problem of creating something of value about which the public can be told. The "something of value" here is professional competence.

The architect need not—indeed, should not—attempt to picture himself and his fellow professional, to employ a newspaperman's recent comment, as "some sort of eight-headed wonder." If it can be agreed that the architect *is* and should be pictured as a sincere, hard-working professional man who combines an artistic talent with technological education and an earnest desire to satisfy the client's needs, then pomposity, the stuffed shirt, and an introverted compulsion toward self-protective statements will not stand between him and his public.

Therefore, a session devoted to a discussion among architects of ways and means to meet the demands for an expanded practice in a complex economy may be as interesting to the local newspaper—and thus to the public—as a "single" performed by a box-office visitor in the very best style of H. G. Wells. If the architect is recognized as being human, he can be sympathized with, praised for his good deeds, forgiven for his mistakes—and, one day—understood.



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FAVORITE FEATURES OF RECENTLY ELECTED FELLOWS: GEORGE JAMES WIMBERLY, FAIA

THE HAWAII TRUST COMPANY BUILDING
Honolulu, T.H.
Wimberly and Cook, Architects

WARNING, *Subversive Trend Revealed*

FEEL IT MY DUTY to alert the membership of The American Institute of Architects to a most dangerous trend in housing. This movement, if allowed to continue, could severely limit the practice of architecture, both here and in England. The following newspaper article (from the *Boston Globe*, March 19, 1958) is a description of the latest of a continuing series of defections from what is right, proper, and in the best interests of the profession . . .

HOME IN TREE BEING ENJOYED BY BRITISH PAIR
Persore, Eng., Mar. 18 (*Reuters*)—A British couple have been living here in a tree for the last six weeks, it was revealed today.

Mrs. Doris Parkes, 37, said she and her husband, Harry, have been living in an old hollow elm tree since they were turned out of their trailer home.

The 30-foot-high leafless tree is on a farm owned by Tom Bomford. The hollow part of the trunk is about five feet across. The inside is covered by sacks.


"I was absolutely amazed when they began living in the tree," Bomford said. "They leave early in the morning and arrive back at the tree late at night."

"One night I saw them cooking a steak," the farmer said, "they looked really happy."

Every lover of music knows who, only, can make a tree. Every lover of nature is familiar with the class of labor which hollows them out. If we of the building industry are to compete, we must design, produce, and market a better product. A six foot diameter aluminum tree, with fluorescent leaves guaranteed not to fall regardless of the weather (color as selected by the architect) is an obvious improvement. Such crude specifications as "All interior finish throughout shall be used sacks, or equal" might be improved as follows: Arras styled by Polonius, distributed by Shakespeare and Co., Ltd., London; Finish Floors, dyed Mouton processed Lamb, as created by Maidenform Dreams, Inc., New York; Steaks, reconstituted, sun drenched, Florida rinds (Vit. C added) packaged by Swifter Amours et Cie., Paris; Happiness, furnished and installed by the Self Improvement Society of Lower Basin Street, now located at the corner of Peel and Carnegie Streets, Los Angeles, California.

Gentlemen, it is either specifications such as these, or extinction.

ROBERT WOODS KENNEDY



EDUCATION

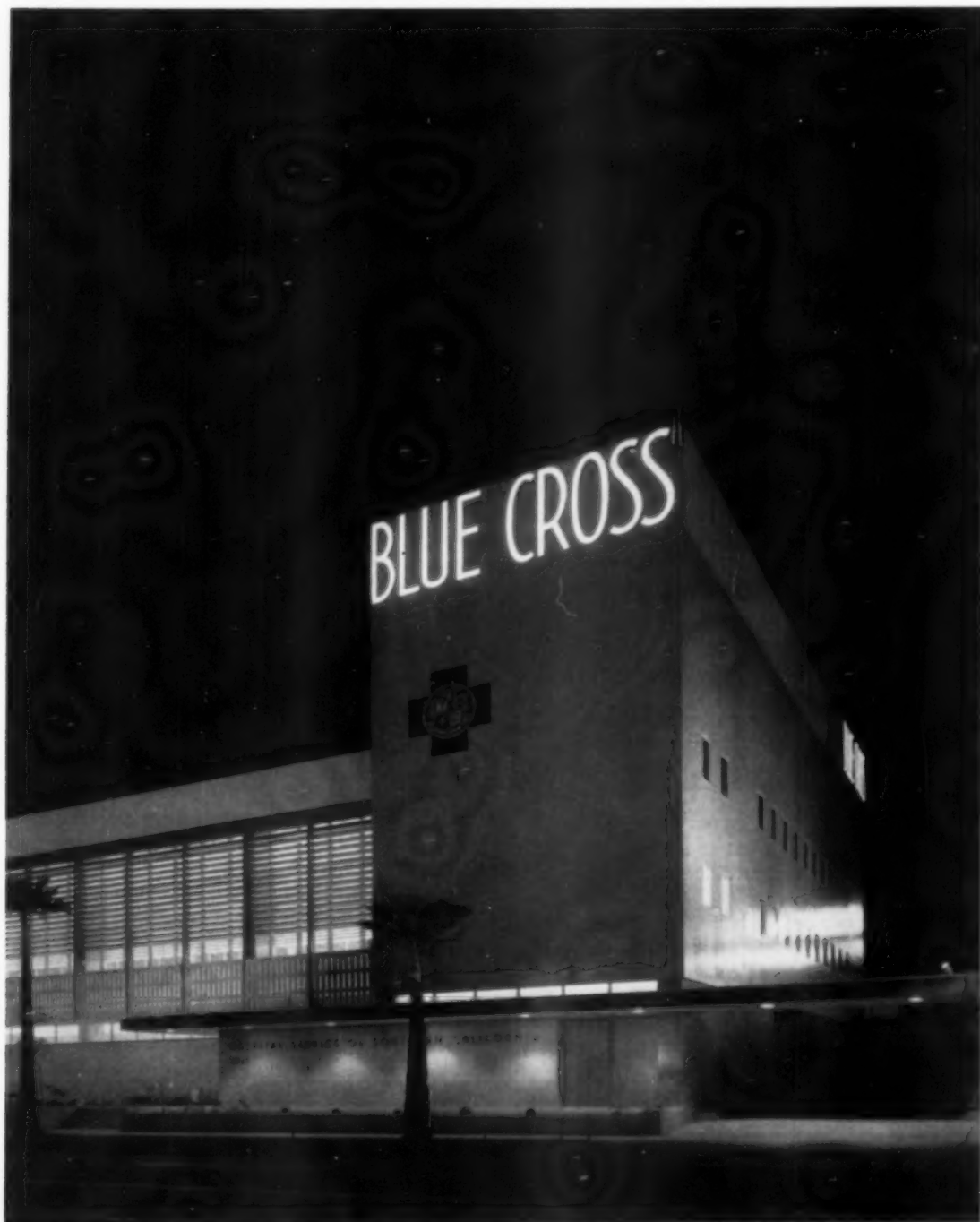
THE SCHOOL OF ARCHITECTURE, University of Virginia, announced the establishment of two new curricula recently added to the program of the School.

A four-year curriculum leading to the degree of Bachelor of Architectural History has been established under the direction of the School of Architecture in collaboration with the Corcoran Department of History of the College of Arts and Sciences. This program provides for a thorough background in the principles of architectural design, and in addition, course work leading to a major in the history of architecture and civilization. Students will be admitted to this program in September 1958.

A five-year curriculum leading to the degree of Bachelor of City Planning has been established as a

separate program under the direction of the School of Architecture. Specifically, the Planning program will be three years in length and students may enter this program following the satisfactory completion of two years of a Bachelor of Arts curriculum in a recognized College or University. The pattern of the program will be developed around course work in principles of City Planning and Design, the social sciences, the institutions of government, and public administration. Students will be admitted to this program for the session beginning in September 1958.

Further information may be obtained from Dean Thomas K. Fitz Patrick, School of Architecture, University of Virginia, Fayerweather Hall, Charlottesville, Virginia.



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FAVORITE FEATURES OF RECENTLY ELECTED FELLOWS: ULYSSES FLOYD RIBLE, FAIA

HOSPITAL SERVICE OF SOUTHERN CALIFORNIA
Allison & Rible, Architects
Los Angeles, California

Library Notes

AN IMPORTANT ACQUISITION

THE LIBRARY HAS RECENTLY ACQUIRED a copy of "The Country Builder's Assistant" by Asher Benjamin. Printed at Greenfield, Massachusetts, in 1797, this has been called "the earliest American architectural book written and published in the United States."

Although preceded in publication in this country by some seven or eight reprints of English books, it is among the first ten architectural books known to have been printed in America. It is also the first of seven books written by Benjamin, which appeared in over forty printings during more than half a century, strong evidence of their importance as a source of inspiration and example for the builders of the first half of the nineteenth century.

In view of its position in American architectural bibliography, the Library feels that with the acquisition of this book it has moved closer towards its expressed goal of securing an outstanding collection on the history of American architecture.

P. R. FILMS

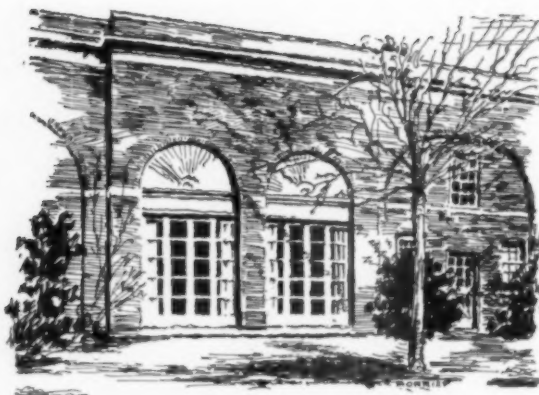
THE LIBRARY IS HANDLING the distribution of the new P. R. films "What Is a House?" and "A School for Johnny," in addition to the older film "Architecture—U.S.A."

The first two may be bought for \$65 and rented for \$5. The latter is now available for sale on special order only at \$200. Rental continues at \$5 plus transportation.

Members desiring to rent any of these films are asked to send their requests directly to the Library, and as far in advance as possible. Due to the limited number of copies of "Architecture—U.S.A." now available, reservations well in advance are desirable during the fall and spring months.

ACCESSION LIST

THE LIBRARY HAS RESUMED issuing its accession list in separate mimeographed form. For those who keep complete files the following information might be helpful. Number 1 appeared Sept. 1, 1953. Number 5 Oct. 1, 1954 was incorrectly numbered 4. Number 12 appeared in *Bulletin of the AIA* vol. 10,



no. 6, p. 186, Nov./Dec. 1956. Number 13, a special list on churches appeared in the *Bulletin* vol. 11, no. 1, p. 23-24, Jan./Feb. 1957. Number 14 appeared in the *Journal of the AIA* vol. 28, no. 1, p. 34 May 1957. The issue that has just appeared is number 15.

Any member who is not presently receiving the list and who wishes to do so, may request the Library to have his name placed on the mailing list. All members are reminded that most books in the Library are available for circulation to corporate members. The fee to cover postage and mailing is fifty cents for the first volume and twenty-five cents for each additional.

BOOKPLATES

THE INSTITUTE HAS HAD three different bookplates for its Library during the course of one hundred years. This and the librarian's own interest in bookplates has prompted him to start for the Library a collection of bookplates of architectural interest. These would fall into three categories: bookplates used by an architect in his own books; bookplates designed by an architect for another; and bookplates embodying architecture in their design but not falling in either of the previous groups. Naturally the most interesting are those of strong architectural interest by an architect for his own use.

Although no special effort has been made to gather these, several interesting items have been secured. The librarian hopes that eventually it may be possible to write an article or perhaps prepare a checklist on them. If any member has bookplates that would fit into such a collection, copies would be gratefully received. It would be helpful to have all pertinent information such as name of owner, name of designer if different, medium, date and significance of design.

G. E. PETTENGILL, Librarian

BOOK REVIEWS

ADVENTURES IN ARCHITECTURE. By Whitney S. Stoddard. 127 pp. 8 3/4" x 11 1/4". New York: 1958; Longmans, Green & Co. \$8.50. The author, Dr. Whitney S. Stoddard, is Professor of the History of Art at Williams College.

This is the story of the evolution of a large long-range project, the gradual replacement of an accumulated complex by nineteen new buildings comprising facilities for several related functions: church, seminary, university, monastery and preparatory school at St. John's Abbey and University, Collegeville, Minn.; Marcel Breuer, architect; Luigi Nervi, consulting engineer; Traynor and Hermanson, associated architects.

The method of selecting the architect is interesting, but not unique as claimed. By the democratic processes of the Benedictine order, twelve architects selected from those nominated; Baur (Switzerland), Belluschi, Boslet (Germany), *Breuer, *Byrne, *Gropius, Kramreiter (Austria), *Murphy, *Neutra, Saarinen (fils), Sharpe (England), and Schwarz (Germany) were informed about the project and invited to signify their interest. Belluschi and Saarinen declined. By vote of the order five (* above) were invited for interviews, after which by written ballot Breuer was selected.

The whole project (only one monastic unit built so far) demonstrates how much freedom is gained by acceptance of and adherence to the real fundamentals clearly stated: liturgical requirements (St. John's being the leader in the Catholic liturgical revival) and the centuries-old Rule of the Benedictine Order. Abbot Baldwin's original letter of invitation included the following: "The Benedictine tradition at its best challenges us to think boldly and to cast our ideals in forms which will be valid for centuries to come, shaping them with all the genius of present-day materials and techniques."

It is also a model for careful and

orderly procedure on the part of a corporate client and the utilization of the varied talents and judgement of the members of the order, including Father Claud Meinberg, Illinois architectural graduate.

A cost-plus building contract permitted adherence to the Order's rule on manual labor. The monks supplied about 20 per cent of the labor involved in the construction of the new monastic wing.

One third of the book is devoted to plans and photographs of models and of the completed monastic wing. Although only a fraction of the project has been built, the evidence justifies the author's statement that "in various ways and very simply Breuer has realized a true monastic character in the design of this building."

"Today's monastery is an outgrowth of fourteen centuries of balance between constancy to the Rule on the one hand and adjustment to the changing social world on the other."

"The spirit of the great abbey church of the past will be preserved in modern times, and the new church at Saint John's in its structure will interpret the liturgy in an architectural language as immediate and as direct as that of the Middle Ages."

W. A. T.

HIGH SCHOOLS TODAY & TOMORROW.

By Charles W. Bursch & John Lyon Reid, FAIA. 17 pp. 8 1/2" x 10 1/2". New York: 1957; Reinhold Publishing Corporation. \$7.95

This is an important either-or book. Its brief statement of an educational philosophy and a sample, architectural preliminary solution *either* rings a wild alarm for the stay-putters, who are education's and architecture's fundamentalists, *or* it charms and persuades by word and graphic line toward acceptance of a new synthesis of schooling ideas.

The philosophy is strictly educational and sincerely held. It is not entirely new, many separate features and techniques are already in use

somewhere. The complete synthesis is a relatively new, evolving concept. Those who have been following the field will recognize its remarkable group-paternity pedigree: by Bursch-Reid-Shaw, out of Cocking. Random Falls and all that. As someone put it, a Dewey-eyed view of education. It is controversial, stemming from "life-adjustment" and "growth-development" theories of education and rising above a certain confusion, perhaps, of currently fashionable "community-involvement."

To call this program "progressive education" would be unfair, however, because of connotations of impracticality in that expression for many honestly bewildered people. There is a sincere statement here about the individual and his development, and a sadly-needed defense of individualism as the only true education. There is also some basic fraction, for followers of this upward way, with entangling briars of the group or team approach, as well as with certain soggy spots of the beloved community.

You may ask, how does a developing leader get experience except in a group? Leadership is a powerful reagent and we can relax about this matter of social chemistry—if we can remain large enough to recognize it. Today's most fanatic fallacy is the anti-intellectual creed that *the team creates more than an average* which the individual can never better. Termites have not yet put a satellite in an orbit and a termite-education will not help us do it. The group *can be led* to achievement, if there is leadership. The leader needs a trio or full orchestra, to fit the music. The players contribute essential notes and chords—and at the right time or it's not music. Symptomatic and delightful as a good jam-session may be, its substance is ephemeral and its architecture incoherent. The strong architect with individual and comprehensive creativity is the best example, if rare, of what we need to

day. We cannot remain a professional instead of a broker and say: Building is too complex today—let the mechanical guys dream up some pipes and wires, let the structurals work out a frame and the civils tell us where to shove dirt and please, Mr. Equity, Jr., how big is an office? This happens too often and is the reason so few buildings have the integrity we also call architecture.

John Lyon Reid, FAIA, of San Francisco, has had a distinguished influence on design for educational facilities. He has not let us down in this book. These extremely facile sketches (as many positions of the human figure as in Hokusai) illustrate a preliminary, sample solution of the educational specifications set forth by Dr. Bursch. They should not be condemned for lack of slopsinks, total inadequacy of an auditorium projection booth or a 4-way frill of a fireplace. These drawings are only one unified architectural expression of the philosophy. One conviction shows forth clearly—architecture with human values has an important educational effect. We make too little of this and architects should constantly strive to make others recognize the values of designed environment.

Many ideas here are provocative, some are borrowed and improved. It is difficult to select a few for praise or blame. Treatment of sports and music, the excellent little theater, flexible loft space—*le plan libre*—throughout, the philosophy of the student work-desk-unit, some statements about square-feet, all seem advanced and persuasive.

Topdaylighting of interior space (out of Reid's Hillsdale School) will still need design study to reduce brightness-contrast with surrounding ceiling. There is rising sentiment against claims of educational values of large auditoriums—much as communities may insist on them. OK—pay for it—but don't crab about the cost of school buildings! The 325-seat little theater is a valuable educational facility.

It is with certain parts of the statement of educational philosophy, however, that questions arise. It

boldly proposes free individual scheduling and extensive individual use of community resources for education, including work-experience alternating with study made more meaningful by such experience. It attacks the boring and unsatisfying sham of unreal school problems and denies that education is only preparation for life. It condemns petty administrative controls of library, class-attendance and credit formalities. There is a lot of good fresh air here! “. . . in actuality, youth constitutes a substantial and vital segment of community life . . .”

In place of traditional controls, however, the program proposes a formidable bureaucracy of guidance and record-keeping personnel with machine-sorted documentation. It almost seems as if the plant should also have a port for an endless extrusion of doctoral dissertations in education.

What is an “unready pupil” and whose fault is it—lazy, irresponsible or incompetent parents, teachers or child? Sometimes schoolboards may be unready—then the excessive cost of the building is the architect's fault!

Would pupils of their own accord select so-called more-difficult subjects? It is a psychological mistake to call subjects more difficult and it builds up mental unwillingness and fear. There may be difficult and unimaginative teaching of any subject.

School staff function in this scheme seems to be that of a horticulturist (if not obstetrician) waiting to assist at a sequence of individual blooming or bearing events. It should not take work-experience to inform a child that mathematics is a prerequisite to the scientific career in which he is interested. Should the child begin by distrusting the teacher's professional word? Why not call it a prerequisite and begin instilling some respect and trust for professional leadership? Perhaps in later years the pupil may vote yes for the building of a flood-control dam.

One repugnant suggestion is that pupils have the same homeroom teacher for four years of highschool.

What if he's an inadequate stinker?

This is a must book for any architect concerned about the educational program as a basis for school planning—and every architect with a school job should be. Get one for your client, too.

E. P.

GOLGOTHA AND THE CHURCH OF THE HOLY SEPULCHRE. By André Parrot. 128 pp. 5" x 7¼". New York: 1957: Philosophical Library. \$2.75

A discussion of some of the archaeological problems connected with the sites of the crucifixion and entombment of Christ, containing much information on the topography of Jerusalem and a chapter on the history of the Church of the Holy Sepulchre.

DECORATIVE DESIGNS FOR CONTEMPORARY INTERIORS. Edited by Konrad Gatz. 240 pp. 8¼" x 11¼". New York: 1957: Architectural Book Publishing Co., Inc. \$12.75

This beautiful book attempts to give a cross-section, not only of the work of various countries and temperaments, but of the many techniques available to present-day designers. It demonstrates the benefits of combining the efforts of architects and artisans, and graphic artists and decorators. Special emphasis is laid upon the use of color, and there are many excellent full-color illustrations.

MODERN ARCHITECTURE IN GERMANY. By Bruno Werner. 80 pp. 8¼" x 8¼". Munich: F. Bruckmann KG. Paper bound.

A beautifully illustrated little book, with English text, showing examples of post-war German buildings designed by all the leading architects of West Germany.

ENGLISH ROMANESQUE LEAD SCULPTURE. By George Zarnecki. 156 pp. 4¾" x 7½". New York: 1957: Philosophical Library. \$4.75

The craftsmanship of the Middle Ages as exemplified in lead fonts is the subject of this little book. Its eighty photographs show beautiful examples of sculpture in low relief.

NEWS

THE FIRST WORLD ASSEMBLY of Engineers and Architects, Friends of Israel, will be held this year from May 29 to June 9, with Prime Minister David Ben Gurion delivering the principal address.

The Assembly, sponsored by the Technion-Israel Institute of Technology and the Association of Engineers and Architects in Israel, is devoted to the theme of "The Role of Technology in the Development of Israel." Architects and engineers from all over the world are expected to attend the sessions and seminars which will be held in the three major cities of Israel—Haifa, Tel Aviv and Jerusalem.

Among the distinguished speakers who will address the sessions, in addition to the Prime Minister and the President of Israel will be Louis Kahn, Professor of Architecture at Yale University and the University of Pennsylvania, the subject of whose paper will be "Order, Space and Design in Architecture."

Additional information may be obtained from the American Society for Technion-Israel Institute of Technology, 1000 5th Avenue, New York City.

THE VIRGINIA CHAPTER has recently established The Virginia Foundation for Architectural Education, Inc., the objects and purposes of which, as stated in its charter, are "to aid and promote by financial assistance and otherwise, all types of architectural development, education and research in the Commonwealth of Virginia, particularly in the established departments or schools of architecture at the University of Virginia and at Virginia Polytechnic Institute."

The Chapter hopes that the establishment of this Foundation will prove an effective means of strengthening the two schools of architecture in Virginia by making available additional funds for carrying out specific programs.

At present there are three categories in which funds could be used advantageously.

First, the enrichment of undergraduate education. The bringing to the campuses of prominent architects, engineers and builders for special lectures or as visiting teachers, by exhibits of current work, and by arranging field trips for the students.

The establishment of scholarships and a student loan fund to help especially talented students who might be lost to the profession for lack of funds.

The securing of tools and equipment with which to bring the students into direct contact with modern construction materials and the establishment of proper laboratory facilities.

The securing, through Foundation means, of

personnel of the highest caliber who are eminently qualified in their teaching profession.

Second, the development of research. The implementation of facilities for study of problems in building which would be of value to the entire state.

The initiation of research activity can be of great value in many ways: in the creation of agencies able to do sponsored developmental studies, in further development of the resources of the state, in the broadened outlook which this work brings to faculty member and student alike, and in the fact that opportunity to do research is an added inducement to the able people needed by the faculties.

Third, the continuing of education. The complexity of the new technologies in building has made it increasingly difficult to keep abreast of current developments. Perhaps the most effective answer to the problem is the refresher or short course, which may be of any length. The Foundation hopes to make available the funds needed for the planning and organization of such courses. Such a program could be of tremendous value to all those whose work requires knowledge of late developments.

The *Journal* publishes the details of The Virginia Foundation for Architectural Education, Inc., in hopes that other Chapters will follow the lead of the Virginia Chapter, as well as to inform *Journal* readers of this worthwhile activity.

AS THE *Journal* goes to press, 91 projects have been nominated for the second annual R. S. Reynolds Memorial Award. Of these nominations 28 structures were designed by American architects. The remaining 63 entries are works by foreign architects.

Five distinguished architects, including J. Roy Carroll, Jr., FAIA, of Philadelphia; Richard M. Bennett, Jr., FAIA, of Chicago; Arthur Loomis Harmon, FAIA, of New York; Richard J. Neutra, FAIA, of Los Angeles, and Pier Luigi Nervi, of Rome, Italy, compose the jury of award.

The R. S. Reynolds Memorial Award is sponsored by the Reynolds Metal Company in memory of its founder, the late Richard Samuel Reynolds. The award consists of a \$25,000 honorarium and an emblem in aluminum designed by a distinguished American sculptor.

The award is presented annually to an architect who has made the most significant contribution, in the judgment of the profession, in the use of aluminum in the building field. The award this year will be presented at the annual convention of the Institute to be held in Cleveland, Ohio, in July.

Letters to the Editor...

EDITOR, *Journal of the AIA*:

IS THE INSTITUTE UNFAIR TO ARCHITECTS?

When a reputable architect is asked to give a serious judgment regarding the architectural proposals of a fellow architect, he makes an effort to know more than he can learn from newspaper accounts before expressing an opinion. In fact, Institute Document 330 on "The Standards of Professional Practice" requires: That an architect be of the highest integrity and judgment; that his advice be unprejudiced, as he has moral responsibilities to professional associates; that he consider the needs and stipulations of the client; and, finally, "an Architect shall not knowingly injure the professional reputation of another architect" and "an Architect shall at no time act in a manner detrimental to the best interests of the profession."

Yet at this time the present officers of the Institute, with a total ignorance of the requirements of the Congress, have yet entered into a campaign which derogates the serious study by its members engaged on the work of alterations and additions to the National Capitol at Washington, have permitted its official organ *Memo* to print quotations from newspapers describing the work as "folly," "barbarism," "vandalism," as "architectural boondoggling," as bearing the "impress of incompetence," stating that "the plan is basically bad" and that all distinguished architects oppose this work. In addition to these derogatory terms the *Memo* has reprinted misstatements of facts.

It has thus demeaned its own members working on this project at the present time, who have recommended the work, as well as such distinguished dead as Thomas U. Walter (past president of the Institute), Cass Gilbert (past president of the Institute) and William Mitchell Kendall, John Russell Pope, Henry Bacon, Charles A. Platt, Charles Coolidge, Edw. York, Philip Sawyer, Thomas Hastings, Francis

P. Sullivan, John M. Howells, and H. Van Buren Magonigle, all of whom appeared before Congressional Committees to state their approval of this proposal, as did the National Commission of Fine Arts by formal action in 1919 and again in 1935.

These officers have taken these steps without discussing the contemplated project in any of its aspects with those of its members who have been professionally engaged to undertake its study for the last two years.

Thus in endeavoring to carry out one mandate of Convention action, the officers have transgressed the mandatory requirements of Institute Document 330, also approved by Institute Convention action.

JOHN F. HARBESON, FAIA
Philadelphia, Pa.

EDITOR'S NOTE: *The Institute is not unfair to architects in printing in the MEMO quotations from editorials expressing country-wide opinion. The MEMO has printed no misstatement of fact, so far as it can ascertain. Nor have the officers of the Institute made any statements derogatory toward any member of the Institute. The officers of the Institute, having undertaken the obligations of their office, are required to carry out Institute policy as defined by the Convention, in this case by three successive Conventions. There is no attempt on the part of the Institute or its officers to limit fair discussion on any topic.*

EDITOR, *Journal of the AIA*:

Congratulations! I really enjoyed the wonderful write-up you gave to the Third Annual Student Forum in the January issue of the *Journal*.

This was my second Student Forum, but this time I came as an officer. This, fortunately, allowed me the opportunity of working side by side with the AIA—watching its preparations and its efforts. Golly, how we do appreciate all you do for us. Maybe some of us fail to show our appreciation at the time, but as the excitement dies we soon realize

how really fortunate we were to have been among the few privileged to attend.

Thank you so much for this article, allowing others to share that eventful three-day Forum. Thanks too, for the boost which it shall give to the new student officers.

EDWARD J. BURKHEAD
Past Secretary of the NASA
Agricultural and Mechanical
College of Texas

EDITOR, *Journal of the AIA*:

We were pleased to note in "Public Relations" by Robert R. Denny, in the March *Journal* that "no less than seven members of the (Baltimore) chapter hold important municipal and civic posts." This is a commendable start in civic endeavor but one which forces me to reach for my slide trombone to blow a blast for the Washington State Chapter which, since 1946, has been responsible for the following:

Seattle City Planning

As a result, primarily, of Chapter activity, this was changed from a Zoning Board of Appeals to a Planning Commission, with a staff and funds and a presently pre-eminent position in city government. Six chapter members have served as commissioners (four have been Chairman) and currently Paul Thiry, FAIA, and Francis Huggard, AIA, are serving.

King County Planning

Two chapter members have served as commissioners and one when Chairman, Perry Johanson, was responsible for development of the County's comprehensive plan.

Puget Sound Regional Planning

The Chapter launched the concept of regional planning and led a three year drive which culminated in official recognition by four counties of a Council with funds and staff. Members of this and the Southwest Washington chapter were jointly responsible and serve as members.

Municipal Art Commission

The Chapter launched the concept and succeeded in obtaining official

approval by the City. Two members, John S. Detlie, and Robert L. Durham serve as members and each has been Chairman.

Board of Appeals

An official board to hear appeals from building code decisions. Inert for many years, this was recently revived through Chapter efforts. Kenneth C. Helms, AIA, was one of its three members.

Board of Adjustment

An official board recently set up to hear appeals from zoning decisions. Chairman, J. Lister Holmes, FAIA, and member, James J. Chiarelli, AIA, and Chapter President.

Urban Renewal

The Mayor has just appointed a citizens Advisory committee, including William J. Bain, FAIA, representing the Seattle Chamber of Commerce, Waldo Christenson, FAIA, representing the Seattle Area Industrial Council, and John L. Wright, AIA, representing the AIA. In January the Mayor appointed Talbot Wegg, AIA, as Urban Renewal Coordinator.

In addition to the above official bodies, the Chapter has been active in at least three civic groups organized pro bono publico;

Greater Seattle Housing Council

Ten civic and governmental organizations banded together to assist in the housing of minority groups. Vice President, John M. Morse, AIA, Member of Executive Committee, Jack Bryant, AIA.

Allied Arts of Seattle

Sixty organizations banded together to advance the cause of all the arts in the city. Founded by the Chapter, with John Detlie as first president and, Nathan Wilkinson, AIA, presently a Board member.

Advisory Committee to the Regents

While the work of this committee is strictly architectural, it is a volunteer group of four appointed to advise the Regents of the University of Washington with respect to all phases of future physical development of the University. Born, to some extent, by suggestion of the Chapter, its members include Arthur Herrman, FAIA, and Lawrence Waldron, AIA.

To summarize: 10 municipal and

civic organizations with Chapter members; 17 Chapter members currently serving; 5 organizations currently or recently "chaired" by Chapter members; 4 organizations which largely owe their existence to activity by the Chapter.

There is in process of gestation, a Citizens Planning Council. Not this year but reasonably soon.

It would be interesting to learn whether any other chapters are more active in the public weal.

TALBOT WEGG
Seattle, Wash.

EDITOR, Journal of the AIA:

Mr. Reed's tree is interesting particularly in that Viollet-le-Duc had no forebears, apparently, was uninfluenced, although much descends from him. Like an orchid he is the chief adornment of the tree, but is air-borne.

That branch descending from Viollet-le-Duc through Frank Furness to Louis Sullivan to Frank Lloyd Wright, the sap getting thinner as it descends, is most convincing.

The term "Picturesque Secessionism" is pertinent to this branch, and to some others on the tree. But the adjective seems ill-suited to Gropius or Neutra of the moderns, or, to go back further, to Guadet, Labrousse, or Durand. They are all in the line of genesis of the "Modern" but the term "picturesque" is hardly suitable to them. The name does not satisfactorily cover so much territory over which the architectural evolution has ranged. In fact "modern" as understood today would be a better name for this tree, however anachronistic it may later become.

JOHN F. HARBESON, FAIA
Philadelphia, Pa.

EDITOR, Journal of the AIA:

It was pleasant and comforting to see the February *Journal* open up with an article by John Detlie, just as it is always pleasant and comforting to find an article, now and then, by our greatly esteemed and also very literate Ralph Walker. More articles of the inspiring sort that these two write would raise the standard of your *Journal*.

It was pleasant and comforting to note that your friend Mr. Bendiner,

admitted that the two pages normally allowed to him are really nothing but "hogwash and drivel." Your Mr. Bendiner might note (March *Journal*) that the French word *croissant* is masculine in gender and not feminine, and one says *un croissant* rather than *une croissant*, as he erroneously opens his monthly "hogwash and drivel."

It was pleasant and comforting to read the letter of the distinguished Chancellor of the College of Fellows, Edgar Williams (February *Journal*) and to observe that he considers—as I do—the PR mania a disease to which Architects, by reason of the distinguished character of their profession, should be immune. I have never been in sympathy with the expenditure of Institute funds for the PR "tripe" or the use of *Journal* pages for its expression. The abandonment of the assorted "kits" that are distributed from time to time would be a blessing.

The pages allowed to PR and Bendiner might well be put to a use more appropriate to the *Journal* of a distinguished profession of ancient lineage, even if they were left blank!

HARRY F. CUNNINGHAM, FAIA
Lincoln, Nebraska

EDITOR, Journal of the AIA:

I would like to congratulate you on the job that you have been doing on the *AIA Journal* which has jumped, in my estimation, from an old period piece to a lively, interesting and stimulating professional journal. I would even go so far as to say that it surpasses the "big three" in its high professional quality and, therefore, has real appeal to thinking, practicing architects.

I am writing this to express my good wishes and hope that this *Journal* may grow in size and importance. Perhaps it might even include distinguished buildings published in photograph form. Most of those now published are distinguished mostly for their unique or newsworthy character rather than their real esthetic excellence. The technical and other studies are wonderful and certainly should continue.

LESTER W. SMITH
Stamford, Conn.

THE EDITOR'S ASIDES

SO OFTEN, when reading, a few words or a phrase will start a train of thought that carries one way beyond the original idea being expressed. In J. Donald Adams' column, "Speaking of Books," in last Sunday's *New York Times Book Review*, the writer is speaking of an address given by the poet Randall Jarrell. "The theme was that the standards imposed by the snowballing force of our mass media constitute a very real threat to cultural values. They already are, in some instances, hamstringing writers who wish to set down the truth—as opposed to the Madison Avenue conception of the good life. We must be constantly on guard against any such invasion."

So it is with the Cult of the Contemporary, I fear. We must beware lest the architectural press, the "snowballing force of our mass media," invade our honest tastes and judgments. The architect who still finds honest solutions within the frame of traditional design need be a bold man indeed today to carry out his convictions. It is only too easy to lift some of the tricks of the truly original contemporary designers out of the magazines, and try for the brass ring of the acclaim of his fellows—without really trying very hard at all. And the rare architect who creates a design which has its roots honestly in traditional design, even though it may not have a columned portico and a lanterned cupola, knows that he has little chance of his work ever being published in a magazine or premiated as "Best of the Year." There is one exception, of course, and that is in the field of house design, for though the architectural press will ignore him, the house magazines, from *House and Garden* to *The Practical Builder*, will print anything—although I must hasten to add that in the case of the former, the requirement of good taste would enter in.

I realize that for saying what I have, I will be branded a reactionary—in fact, I don't doubt that I already have. But that is not true.

Nobody takes more delight than I in some of the perfectly beautiful and even thrilling contemporary work that is being done today. But it is the element of fadism in so much modern work that I deplore, and the prevalent fear of non-conformity in architectural design.

Now that I've stuck my neck out this far, I'll repeat what I've said publicly before: With a few brilliant exceptions, most of the beautiful contemporary design being executed today was designed by men who are old enough to have been brought up in the old tradition—and *thought* their way out. The majority of the younger men had the misfortune to attend architectural school during the period when they preached, to quote Henry Ford, "History is bunk." Now that the pendulum has swung again, and most of the schools have thorough and well-balanced courses in the history of architecture—far better taught, incidentally, than ever before—we can hope for a broader appreciation of the past and more mature design for the future from today's graduates.

THE INSTITUTE IS PROMOTING a project which could well turn out to be its greatest contribution to the cultural life of the country, as well as the grandest public relations job for architecture that could be conceived of. It has been mentioned briefly in the *Memo*, and the architectural press has also printed short accounts of it. It's time for the *Journal* to tell a little more about it.

About three years ago, Mrs. Louise Mendelsohn, the widow of Eric Mendelsohn, drew up a proposal for a Museum of Architecture, which she sent to architects, museum directors, architectural writers and others all over the world. Naturally, the idea fell on fertile ground within the AIA. Last year the Board of Directors appointed a Committee on Architectural Museum, consisting of First Vice President John Noble Richards, FAIA, Chairman, Nathaniel Owings, FAIA, Samuel Wilson Jr., FAIA, Hugh A. Stubbins,

Jr., and John S. Detlie. Executive Director Purves is also working closely with the Committee; I am attached to it as Staff Executive.

The Committee has had two meetings, and other informal discussions, and the progress up to date is somewhat as follows: A preliminary program has been drawn up and agreed upon; one of the foundations has expressed sufficient interest in it to give us hope for funds make a more thorough study; and Dr. Leonard Carmichael, Secretary of the Smithsonian Institution, has offered us space in the Smithsonian. The value of the latter is incalculable, for it not only assures us of a roof over our heads but it also carries with it a guaranteed built-in audience of several million people a year.

The Committee's program envisions a museum which will ultimately include a central exhibit hall for changing exhibits, the starting point for travelling exhibits; and a permanent exhibit of the architecture of all countries in all ages. The exhibits would consist of blown-up photographs, models, and actual materials taken from the buildings represented, taking the fullest advantage of the most advanced techniques in creating "living displays" by means of lighting and dramatic arrangements. There should also be a library for books, drawings, documents and other records which could ultimately become a world center for research and study; also a circulating collection of books, films and microfilms. There should be a publications program on both the scholarly and popular levels; and an auditorium and meeting rooms, with reading and study rooms for the use of scholars.

It is a project on a very grand scale, and should be a tremendous influence on public education and appreciation of architecture—and the Institute will have a large part in establishing it and arranging for the exhibits.

Jim



Van Tassel

Problems of the Building Industry

by NORMAN J. SCHLOSSMAN, FAIA

BUILDERS always have problems. The Romans had them, the Greeks had them, and today we find ourselves struggling with some of the same old ones, despite their newer aspects. Keeping out the rain, keeping in the heat, holding up the roof, letting in the light, keeping down the cost—these are nothing new, except that in our impatient society the demands of a turbulent economy and an expanding technology make our problems seem more pressing.

The architect constantly faces physical problems in building. These are problems of materials and equipment, their limitations and their use. They may not be the architect's most important problems but they are his

peskiest ones, for the most inspired design or most ingenious plan is soon forgotten when there are noises in the plumbing, water in the basement, or drafts on the neck. To attempt to solve some of these physical building problems, we need:

- more study of our thin, lightweight walls—particularly to overcome their tendency to leak—and a better understanding and acceptance of them by building code officials
- better methods and workmanship to insure masonry walls against leaks
- windows without leaks
- partitions and suspended ceilings (and a combination of them) that transmit less sound—some kind of acoustical deodorant to overcome sound after it's made but before it's transmitted
- roofing materials that can be used

and walked upon, so that roofs can be used as green-areas or space for recreation

- an ingredient in concrete to make it not only vapor-proof and watertight, but self-sealing—like a puncture-proof tire—in the event of cracks
- more structural materials with integral and more finished finishes
- more finish materials that are tough, easily maintained and inexpensive—finishes that can be sprayed on or otherwise easily applied to the structure, that are stay-on-able, and that can conceal the deficiencies of our present-day workmanship
- more knowledge and better methods to cope with expansion, contraction, and settlement, and to avoid the curse of creaks and cracks—if we're going to build buildings with skins, we need

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From a talk presented to the joint meeting of the Building Research Advisory Board and the Board of Governors of the Building Research Institute at the National Academy of Sciences, February 11 and 12, 1968.

more materials and assemblies, like skin, that can stretch

- research into causes and effects in buildings and on the relationship between seemingly unrelated factors—for example, how much of the infiltration thru walls and windows could be eliminated by studying these items themselves and how much, perhaps, by studying the negative pressures set up by mechanical exhaust-systems, or by the stack-effect in tall structures?

With all the new materials we are now using how much do we know about which ones may safely be used in combination and which may not? Are there deteriorating conditions at work within our buildings that we don't know about?

How good are our construction practices in practice? With so much demolition going on, we might inspect more structures as they are coming down to see how they are standing up.

Architects must consider economic problems. In fact, physical problems of buildings are often economic ones at heart. Given enough budget, it is no great trick to lick the elements or, for example, combat the transmission of sound. There are plenty of good ways at hand if you can pay enough. Most often the real problem is the limited cost a project can afford. Cost in itself is not a simple thing. A balance must be struck before a choice can be made between first cost, upkeep, and obsolescence, and this balance varies with the time and locality.

What should we consider the economic lifetime of our buildings in these times of changing finances, and shifting populations, on the threshold of an atomic age? Scores of structurally sound buildings are demolished annually because of economics and obsolescence. What can we do to lengthen their life, or at least to reduce the present imbalance between the life of the structure and the life of the equipment and the guts?

We have other economic problems. The three essentials of life are food, clothing, and shelter. In our abundant country, in this enlightened age, few people are underfed or in-

adequately clothed. Wouldn't it be wonderful if we could say as much for shelter! In Chicago alone this winter almost a score of persons have perished from disasters in woefully sub-standard housing. The reasons we must put up with sub-standard housing may be social or even political—but they are equally reasons of building economics and equally our concern. We must continue the search for ways to put decent housing within wider grasp.

Architects must consider human reactions. Width of corridors, height of ceilings, or room areas must be considered not just from the standpoint of function, but also from the quality of space. In our own office, we have often found that lower ceilings or varying ceilings were preferable to higher ones—and less expensive as well. We usually decide it now by instinct or code. Research might help us find the answers to these problems as well as to the following:

- should lighting, ventilation, air-conditioning, and acoustics be designed merely to conform to hand-book standards?—where do yardsticks leave off and emotions begin?
- if 40 foot-candles is good lighting, is 60 obviously better, and 80 better yet?
- is complete uniformity in lighting really the most satisfying and always the best?—why do we tire of the effect of unmitigated sunshine and long for a little shade?
- are windows becoming too big?—what's the difference in spirit and efficiency of the occupants of a room with an all-glass outside wall as contrasted to those in one with a smaller window or windows? Is the reaction different in apartments from that in offices? In hospitals and in schools? Does it differ in different latitudes and for different orientations and exposures? What difference does it make to the occupants where a window is placed in relation to the ceiling, floor, or wall space around it? What are human reactions to controlled quantities of glare, contrast, and reflections? To color, to texture, to form?

- is the best possible air-conditioning system one that maintains uniform temperatures and humidities without noticeable movements of air?

In our dependence on science and instruments there should be some better measure of what buildings *do* to people. We should make our buildings greater sources of joy. All new schools, hospitals and office buildings presumably do a reasonably good job of providing space, keeping out the elements, supplying air, and distributing light, but how many inspire the kids, give patients a lift, or keep the office-help content at their desks instead of around the water-cooler? This is not just a question of esthetics. It is mainly the observing and recording of effects—of seeing what goes on around us. Research might teach us more about how people are affected by what we do to our buildings despite the limits that undoubtedly exist where science ends and judgment and genius begin.

Finally, what about such truly esthetic problems as, for instance, excessive monotony in design? This particularly concerns our subdivisions and developmental housing. Communities are up-in-arms about it to the point that laws are being passed in an attempt to regulate it. This can be a subject for research. If we want curtainwalls to remain in favor and want to develop their advantages, we must find more means to enlarge their possibilities of architectural expression. In buildings, as in everything else, too much of the same is too much.

Research is wonderful, research is our business. There is no problem of materials, construction, or engineering that research, given time, cannot lick. A civilization that can put Sputniks and Explorers in the sky should readily solve any physical building problem on earth. But as we press ahead with research, we must also remember the position of research in the total scheme of things. Research is a tool for the hands of men. Research itself depends upon evaluations by human beings—perhaps nothing exists, in the final analysis, except in the human mind.

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SCHOOL PLANT STUDIES

One More Round in the School Cost Battle

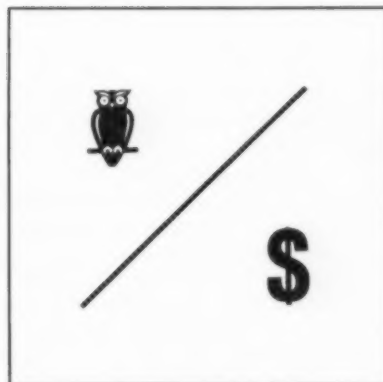
Landis Gores, AIA

- A VALUE CRITERION
- TABLE
- AN EXAMPLE ANALYZED

NOTE:

THIS IS THIRTY-FIRST OF A SERIES OF PAPERS PREPARED BY MEMBERS OF THE AIA COMMITTEE ON SCHOOL BUILDINGS, & BY SELECTED SPECIALISTS, TO MAKE LAYMEN AWARE OF SCHOOL BUILDING PROBLEMS & TRENDS & TO STIMULATE DISCUSSION. THEY ARE NOT INTENDED TO BE DEFINITIVE LAST WORDS & CARRY ONLY THE AUTHORITY OF THEIR RESPECTIVE AUTHORS. THE SERIES WILL BE EDITED BY THE COMMITTEE & ISSUED BY THE AIA DEPARTMENT OF EDUCATION & RESEARCH UNDER SPONSORSHIP OF THE AMERICAN ARCHITECTURAL FOUNDATION. MANY NEW SUBJECTS ARE BEING WORKED ON & CONTRIBUTED ARTICLES ARE WELCOME. WIDESPREAD DISTRIBUTION TO LAYMEN & EDUCATORS IS MADE OF THESE NON-TECHNICAL ARTICLES IN REPRINT FORM.

(one copy each issue free—additional copies 10¢ each)



ONE MORE ROUND IN THE SCHOOL COST BATTLE

by Landis Gores, AIA

EVEN back in pre-satellite days, educational costs in the US were a subject that bubbled and frothed like a seething caldron; and a series of forays into the field last summer by some very popular journalists for pages of possibly too popular publications can only be agreed to have occasioned some thoroughly noisy explosions which were curiously devoid of significance. Certainly the serious and reasonable rebuttals which appeared in our major architectural magazines are to be welcomed for returning the discussion to facts and figures and chapters and verses—and among other things to pointing out the minuscule role of the architect in causation of school costs. And yet to this one interested spectator—no participant, being an architect who has yet to be commissioned with the five schools it is necessary to show to one's credit before he can hope to be entrusted with his first one, yet not really an 'educator' either, having not once been within the gates of a normal school or teachers' college—to this one the temptation is irresistible to say that we have been thus far fencing around with what may well be the really central issue in the question of educational building costs. And so, like a fool, he rushes in where experts fear to tread—although, be it said to their credit, they do not deny the need. School Consultant Nikolaus L. Engelhardt, Jr, in *Architectural Forum*, November 1957, says one "all-important item still escapes these simple end-figures . . . the quality of the educational program."

A VALUE CRITERION

Here, at last, is the subject which should enlist, if it has not already, the attention of every citizen—we are all in it together. The late John Knox Shear touched on this aspect also in *Architectural Record*, October 1957: "At the outset, the very value placed on education differs widely. Where books are revered, libraries will be bigger, and where

basketball, gymnasiums." It is a matter which has long fascinated this critic, has impelled him through countless publications and investigations in search of such a quality, or value, criterion. Having found none ready-made, he has therefore constructed, and proposes here to set down, his own suggested tabulations for assessing school building programs in terms of educational quality. These figures are certainly not correct, for they are inescapably subjective but so are all value judgments. If they can only serve as whipping posts, that others may stand up and express differing value judgments in opposition to them, they will have served a signal purpose in redirecting attention for the lion's share of cost responsibility from the architect to the essential owner, the board of education and the taxpayer-voter.

How are educational costs assessed, in terms of educational values? There is, in fact, a sort of Basic Field Manual on the subject, the *Biennial Survey of Education in the US*, issued by the US Office of Education, eg 1948-50, ed 1953—unfortunately its accounting breakdown, while classical for bookkeepers, will have nothing to do with volatile conceptions like educational values. The categories are:

administration
instruction
operation
maintenance
auxiliary services
fixed charges

The briefest of study establishes that items 2 and 3 both include costs connected with every conceivable feature of the educational program and, without any further attempt at distinction, clearly some more incisive, more significant, more subjective criteria are required for value judgments.

The field, from here on, is open. It is vast, only slightly contoured. But it is not entirely without signposts—Mr. Shear's quoted sentence points us a way. Other arrows in

same direction are to be seen day after day, in editorial pages, in news and opinion magazines, in reports of words and thinking of many serious men. Arthur Bestor, Professor of History at the University of Illinois, suggests the following series of educational priorities:

1. standard instruction in basic intellectual disciplines
2. special programs for superior students
3. remedial programs
4. intramural athletic & physical fitness programs
5. vocational training in special skills
6. extracurricular activities
7. scholarship funds for able students in need
8. custodial and life-adjustment programs
9. interscholastic athletics

Once priorities have been proposed in the race for the educational dollar, explanations are clearly in order, especially for those categories at the bottom of any man's list. Assuming 1-4 to be self-explanatory, one must limit 5 to technical vocational training, machine tool and metal fabricating, carpenter and cabinetwork training, etc, in urban areas, agriculture and livestock in rural areas, to avoid confusion with 8. Category 6 includes such formative but ancillary activities as student publications, student government, student clubs with various worthy interests, prom, student welcome and other broadly social committees. Category 7 involves recognition of need for educational funds, in default of more normal sources, for very gifted students of depressed economic background who require more than tuition aid to keep them in school past the statutory minimum age. Category 8 is the great grab-basket—not only cooking and sewing and 'general business,' but a multitude of mundane activities which already have been seen to demand a greater share of the education (*The Restoration of Learning*, New York, 1955)

cational dollar, both school plant and instructional, then all of 1-3:

- consumer education: how to shop smartly
- how to make a family budget
- how to look at movies, or TV, or whatever
- how to be popular at parties and dances
- baby care and training
- child psychology
- elementary sociology and civics
- elementary hygiene
- sex education
- driver training

Meanwhile, 9 includes not only actual athletic contests, but allied spectacularity such as band and chorus (not to be confused with the serious study of music), cheerleading, drum majoretting, etc. . . . Against anguished protests, let it be remembered none of these categories is of itself stigmatized. But since they all compete for the educational dollar, there must be priorities.

It will not be possible, in any case,

to apply this scale of priorities for the general educational dollar directly to school building costs. But, adapted very respectfully from that scale, a new scale of priorities for a school building program emerges in outline, with alphabetic tabs this time and a numerical value rating:

- A. standard instruction in basic disciplines 10
- B. superior and remedial program facilities 9
- C. fine arts, etc, instruction and practice 7
- D. intramural athletics and physical fitness programs 5
- E. vocational training in special skills 4
- F. extra-curricular activities 3
- G. custodial and life-adjustment programs 2
- H. interscholastic athletics 1
- J. administration and basic functional spaces 3

A few explanations are in order again. Categories 2 and 3 have been combined into B since physical plant

required is virtually indistinguishable. C (visual arts, architecture, music, drama, etc) is a new departure, a quirk of this observer's values, the product of his conviction that esthetic education is a very important component of the educational process. Categories D, E, and F are conceived as unchanged from 4-5-6. Category 7 drops out as inapplicable in a study of physical building programs. Categories 8 and 9 remain as G and H. But the addition of a new category seems also necessary: the inevitable functional elements which bear no more, it seems, on one facet of the educational program than on another, but which still must be housed, as efficiently as possible, yet at some cost—administration, cafeteria, walks, drives and parking, also health suites, hall lockers and storerooms. All these and more of this order are included in Category J. Finally, these tabulated priorities suggest a diversion already indicated in the table:

classrooms	80% A	10% B	10% G	91
kindergartens	80% A	10% B	10% G	91
science labs	90% A	10% B		99
general business & typing	100% G			20
home economics	100% G			20
art rooms	60% C	20% B	20% G	64
shop & farm buildings	60% E	40% G		32
band & chorus rooms	70% H	30% F		16
gymnasias	50% D	50% H		30
pool	70% D	30% H		38
study halls	80% A	20% G		84
general education labs	70% G	20% B	10% J	35
auditorium	40% G	30% C	20% F	44
music rooms	70% C	20% G	10% B	62
cafeteria	100% J			30
library	90% A	10% B		99
shower & locker rooms	60% D	40% H		34
administration & health suite	60% J	20% D	20% G	32
guidance & conference rooms	100% B			90
student organizations	100% F			30
teachers' lounges & offices	100% A			100
undifferentiated administration	(see comment bottom 2nd column p. 258)			40
paved & landscaped playspace	70% D	30% G		41
paved parking & roads	80% J	20% H		26
athletic fields	70% D	30% H		38
stadium, grandstands, rink	10% D	90% H		14
stage equipment	40% C	30% F	30% G	43
science equipment	80% A	20% B		98
cabinets & lockers	50% J	40% G	10% A	33
kitchen equipment	70% J	30% G		27

To resist ascribing point values in strict reverse order and to give a little extra weight where weight is due. Thus A and B stand slightly apart at the top of the list: with 10 and 9—C with 7 is still quite a cut, and quite rightly, above the great group of activities neither intellectual nor academic which obtain valuations between 5 and 1. Meanwhile J is too basic to deserve banishment below the level of interscholastic "athletic" spectacles. After due consideration it is accorded a weight of 3, not so much because of any doubt of its necessity as because of a familiarity with its tendency to proliferate in classic conformity with Parkinson's Law.

The application of these thus established priorities to given physical spaces is speeded up by the examples of N. L. Engelhardt, Jr, in his excellent technical cost analysis in the *Forum* article cited earlier: his comprehensive lists of components, especially lists No. 1 and No. 5 may be transcribed almost directly to provide the bulk of the entries on the next tabulation. (See bottom p. 257) Once again a subjective judgment looms: Very few of the listed spaces are devoted to one and only one of the 9 categories of this last tabulation. And so each space must be considered separately, with probable extent of its allocation to one or more of the 9 fields of activity accounted for. It seems only fair to limit such an imprecise apportionment to 10%, among other reasons because it is thus possible to develop a total value index of all physical elements between 1 and 100 instead of one of 10 times that range. For example, an art room would tend to be used about 60% of the day for serious esthetic study, appreciation and practice by the general range of students, about 20% for special work either of a remedial nature for slow or difficult students or of an advanced nature for specially qualified students, and about 20% for socio-psychological adjustment projects in self-expression through permissive finger or spatter or wiggle-painting, cutting paper-and-paste abstractions or general 2- or 3- dimensional gold-bricking. Arithmetically, 6C (tithing

percentages allotted) plus 2 B plus 2 G equals $6 \times 7 + 2 \times 9 + 2 \times 2$ equals index 64 for art rooms. Meanwhile a science laboratory, which still presumably lends itself to nothing (may God preserve us) except serious study by every member for 90% of its day plus an extra 10% of double duty with advanced students, receives an index of 9 A plus 1 B equals $9 \times 10 + 1 \times 9$ equals 99, or just about as close to occupational perfection as can be desired. [Ed: these calculations presuppose highest possible utilization but may perhaps be applied to any general average utilization]

Another's list, every other list, will differ from this one. But that is as it should be: only let every school board member or school building committee member sit down for the time required to place his own honest best evaluations on these tables, and this paper will have more than served its purpose. To return to a few more hotly disputable items of the last table—various athletic elements are apportioned between D and H from estimates of extent to which their size or equipment cost has been inflated for benefit of paying spectators rather than of participating students. In the hope that the auditorium may occasionally witness convocations of most all the student body for exposure to a truly outstanding person or institution, it has been accorded a minimal (10%) B component as acknowledgment of its superior program potentialities. As to the radical divergence of index values between study halls and general education laboratories, these result from an assumption that the pedagogic policy of the institution concerned is implicit in the terminology used: in a study hall one studies, in a general education laboratory one does apparently almost anything except study. Finally, in the table above there has been added to the basic Engelhardt breakdown a classification of undifferentiated administration, in view of frequent impossibility of determining, from plans under comparison, exact uses to which various component sub-areas of 'administration' are put—certain minor but high priority activities

may also be involved, such as a clinical psychological guidance suite for determining needs of exceptional individuals or a teachers' retreat with privacy enough to justify the name. For the rest, no explanations, no apologies.

With this table complete, there remains only application to specific, to actual schools. While Engelhardt's breakdown clearly proposes, as does this paper, to be valid for primary as well as for secondary schools, markedly sharper divergences are sure to manifest themselves in studies of highschools where the galaxy of non-classroom spaces is so far more extensive. Accordingly, the next project at hand is to analyze, by these criteria, 4 of the 5 new highschools presented in detail in the *Architectural Record*, October 1957. The 5th school therein considered involves such a high proportion of future construction as to render it unsuitable to this study. At the start, be it noted that for speed and simplification all classrooms have been assumed at 750 sf (according to Engelhardt, no classroom no matter how large should hold more than 27 pupils—if a top limit is set on the number of pupils, a maximum room size would appear in order also, and comparison is made more apt in both particulars). All other construction areas are measured to include wall thickness where scale is sufficiently large. Areas developed but not built on are measured, then discounted, as follows: walks, landscaped courts and play areas, roads and paved parking areas divided by 30 on the assumption their cost will approximate \$0.50 psf where building costs average \$15 psf. Athletic fields are divided by 50 on a similar assumption. Laboratory, kitchen, stage equipment, etc, are likewise translated on a basis of 1 sf construction equivalence per \$15 of equipment cost. To each area equivalent is applied the relevant index figure from the table—totals are then calculated, of basic area and of evaluated educational use area—resulting ratio is the index of the quality of the educational program embodied in building examined—QED.

classrooms	13,500 sf	91	1,225,000
science labs	5,600	99	554,400
commercial education	1,680	20	33,600
home economics	1,920	20	36,400
art rooms	1,920	64	122,700
shop	3,200	32	102,600
band room	1,200	16	19,200
gymnasia	7,500	30	225,000
auditorium	7,400	44	326,000
music rooms	750	62	46,500
cafeteria	4,400	30	132,000
library	3,600	99	356,400
showers & lockers	6,100	34	207,400
administration—undiff	4,200	40	168,000
paved & landscaped play	600 equiv	41	24,600
parking & roads	2,500 equiv	26	65,000
athletic fields	3,800 equiv	38	142,000
stage equipment	470 equiv	43	20,000
science equipment	1,300 equiv	98	127,000
cabinets & lockers	6,200 equiv	33	204,600
kitchen equipment	1,560 equiv	27	41,300

totals

79,400

4,176,700

EDUCATIONAL QUALITY INDICES:

John Jay High School, Cross River, NY	4,176,700/79,400	52.6
Washington High School, Phoenix, Ariz	5,399,000/109,800	49.2
Horace Mann High School, Little Rock, Ark	3,835,100/66,845	57.5
Westwood High School, Westwood, Mass	3,604,200/66,950	53.9

AN EXAMPLE

One school suffices to demonstrate breakdown and calculations involved: the first of the 4 proposed, John Jay High School, in Cross River, NY, is at same time most fully documented in the *Record* article, and accordingly follows here-with:

It is to be noted that in each case above, completed form and maximum enrollment of school is considered, since several projects, in departure from their current operation, envisage substantial increases in numbers of classrooms while one plans no increase in classrooms but several substantial non-academic additions. To analyze from existing conditions would thus be clearly unfair. Also note that data on equipment costs are furnished in original text in unequal patches if at all. Such items are as a whole relatively small and not markedly below eventual final indices but in fairness to the school most completely tabulated (John Jay High School), its quality index will rise from 52.6

to 54.1 if its equipment costs be eliminated from consideration as is the case with most others. Finally, note that lowest-rated school of the 4 considered presents somewhat of a special case—it is only the heavy investment in vocational training areas, shop and farm both, far beyond that of any other school and presumably in response to a district plan or some such local pressure, that brings the index in this one case fractionally below 50.

The greatest interest, to this observer, lies in the relatively small divergence among the 4 widely separated schools studied. It would seem to indicate a considerable uniformity of opinion among superintendents, school boards or taxpayers, across the nation, about the type of educational facilities they wish to purchase with their building dollars. The fact that all 4 schools rate only in lower and middle 50s by the criteria is equally significant, though in a slightly different way. So long as the community has an undisputed

sufficiency of dollars, surely it is free to expend them on all facets of the educational program whether they have a value rating of 1 to 10 in the table, provided only that funds are budgeted for higher value activities in advance of ones of lower priority. But in communities where school building funds are limited, or where intention is to secure as nearly as possible maximum educational value from the building dollar, it would be surprising if somehow a higher educational quality index could not be secured.

Two unidentified schools cited by N L Englehardt, Jr, in the *Forum*, November 1957, provide a case in point. Application of the space indices to these schools results in an educational quality index for School A, the austerity school, of 58.6—for School B, the luxury school, of 53.2. Here, for all its economy, School A, with only half the square footage of School B, both total and per pupil, receives an index only 1.1 above the highest of the 4 identified *Record*

classrooms (24)	18,000 sf	91	1,638,000
science labs	6,000	99	594,000
art rooms	2,000	64	128,000
shop	2,000	32	64,000
gymnasia	6,500	30	195,000
showers & lockers	2,500	34	87,500
auditorium	6,000	44	264,000
music rooms	2,000	62	124,000
cafeteria	4,000	30	120,000
library	2,500	99	247,500
study halls	2,000	84	168,000
administration—undiff	1,500	40	60,000
totals	55,000		3,690,000
educational quality index:		3,690,000/55,000	67.1

schools rated earlier. Many amenities of program have been sacrificed, and more than a few essentials of education have been seriously cramped or slighted. A smaller and cheaper school has been built, to be sure, but at a very real educational cost. And yet the cost, the sacrificing and slighting, are not inevitable. Some belt-tightening, perhaps, but not real cramping, if only the low-priority non-educational proclivities are closely watched and trimmed or excised wherever possible. A new, modest but well-rounded highschool can be formulated for the same 900 students as Schools A and B, with an increase in net area over the former of only 15%, but with restoration of all the really crucial features of the luxury version which were lacking in the economy model—auditorium separate from cafeteria, study halls separate from library, more and larger classrooms and science, art and music rooms, as in the breakdown above.

To raise quality index substantially above this 67.1 would appear to be a formidable work, entailing general revision of curriculum and of teaching emphasis sufficient to justify a revaluation of our space indices. This must be a consummation devoutly to be wished, in some quarters at least, with the withering away of the two lowest-priority elements—namely interscholastic athletic spectacles and permissive life-adjustment programs, almost every instructional space would rise in dignity, resulting in the altering of certain of the indices to read as follows:

classroom	98
art rooms	74
shops	40
gymnasia	40
study halls	93
auditorium	66
music rooms	74
showers and lockers	40

And as a consequence, the same physical spaces which were accorded a quality index of 67.1, would in

this new school attain a quality index of 76.2.

If this be but a numbers game, let each man make the best of it. Of course these figures have been in many instances subjective, and vulnerable—the professional school planning expert is not so foolhardy as to risk his specialty on such will-o'-the-wisps and he, like Mr. Engelhardt, appraises with laudable lucidity site costs and administrative costs, construction costs and fees, correction factors for year and time of year and region and type of community, gross area and net area, character of structure and character of materials. And not for a moment is the importance of any of these hard factors to be denied or minimized. But there still remains that elusive, quintessential question of the real value of the educational program each building embodies—and so here is one tentative suggestion of how to go about the answer.

TECHNICAL BIBLIOGRAPHY

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Symposium on Design & Tests of Building Structures Seismic & Shock Loading & Glued Laminated & Other Constructions. (No. 209)

ASTM 1957 Supplements

The American Society for Testing Materials, 1916 Race St., Philadelphia 3, Pa. 6" x 9"

To keep up to date the triennially published Book of ASTM Standards, ASTM, in the intervening years, issues Supplements to each part of the Book.

1957 Supplements, issued in 7 parts at \$4.00 each, give in their latest form 415 specifications, tests and definitions which either were issued for the first time in 1957 or revised since their appearance in 1955 Book or 1956 Supplements.

Individual Parts are as follows:

- Part 1 Ferrous Metals—520 pp
- Part 2 Non-Ferrous Metals—380 pp
- Part 3 Cement, Concrete, Ceramics,

Thermal Insulation, Road Materials, Waterproofing, Soils—360 pp

Part 4 Paint, Naval Stores, Wood, Cellulose, Wax Polishes, Sandwich and Building Constructions, Fire Tests—218 pp

Part 5 Fuels, Petroleum, Aromatic Hydrocarbons, Engine Antifreezes—340 pp

Part 6 Rubber, Plastics, Electric Insulation—423 pp

Part 7 Textiles, Soap, Water, Paper, Adhesives, Shipping Containers—280 pp

Supplement to American Standard Safety Code for Elevators, Dumbwaiters & Escalators A17.1-1955. ASA A17.1a-1957

American Standards Association, 70 E. 45th St., New York 17, N. Y. 5½" x 7¾", 18p, \$1.00

This Supplement, when incorporated into the 1955 Code—ASA A17.1-1955, constitutes the 1957 American Standard Safety Code for Elevators, Dumbwaiters and Escalators.

Standard for Places of Outdoor Assembly, Grandstands & Tents, NFPA No. 102.

National Fire Protection Association, 60 Batterymarch St., Boston 10, Mass. May 1957. 4¾" x 7¼", 16p, 50¢

This edition supersedes that of 1949 and was adopted by the Building Officials Conference of America, May 9, 1957.

Covers design, construction, location, maintenance, and use of grandstands, indoor or outdoor, including temporary, permanent, portable, or foldable stands, and of tents or other structures and premises for use or used as places of outdoor assembly. Its purpose is to specify reasonable requirements to safeguard persons and property insofar as it pertains to public safety.

Fire Tests of Door Assemblies. UL 10(b) 3rd Edition, Nov. 1957 (Supersedes edition of July 1950)

Underwriters' Laboratories, Inc., 207 E. Ohio St., Chicago 11, Ill. 5½" x 9"

These methods of test are applicable to door assemblies of various materials and types of construction and are intended to determine the suitability of door assemblies for use in locations where fire resistance of a specified duration is required.

Architects' Detail Sheets, Third Series Edited by Edward D. Mills, FRIBA. Published for The Architect and Buildings News, Iliffe and Sons, Ltd., London.

Philosophical Library, New York. 1955. 8¾" x 11½", Cloth bound, 232p, \$12.00

A series of 96 Plates selected from *The Architect and Building News*, including details of balconies, entrances and shop fronts, fireplaces,

fittings, staircases, wall details, windows, and miscellaneous. Each detail plate is accompanied by a photograph of the completed work. While devoted primarily to English work, a few American examples are included.

Engineering Structural Failures.

Rolt Hammond, N.Y., Philosophical Library, 1956. 224p, 6" x 9", \$12 bd

As Sir Bruce White suggests in his foreword, engineers must learn from the genuine errors of judgment in design and execution which on occasion have disastrous results. This book reports on the causes and results of failure in modern structures of various types. The various chapters treat of earthworks, dams, maritime structures, buildings, bridges, underground structures, vibration problems, welded structures, lessons of failures.

The architect will find only limited interest in most of the chapters, but will concern himself primarily with those on buildings and vibrations. Although the book is English in origin, most of the instances of building failure are American, including the famous Knickerbocker Theatre collapse. In each case the author endeavors to point out exactly what happened and in what way the failure could have been avoided.

The chapter on vibration deals primarily with two kinds—that caused by machinery and by earthquakes. Some basic principles of earthquake-resistant design are suggested.

Handbook of Noise Control

Edited by Cyril M. Harris. 1014 pp, 6" x 9", McGraw-Hill Book Company, \$16.50

The editor, Cyril M. Harris, is Associate Professor of Electrical Engineering at Columbia University, a Fellow and past officer of the Acoustical Society of America.

Each of the 40 chapters is by a different author, selected as an expert in the subject.

The chapters cover the following general subjects: Properties of sound, effects of noise on man, vibration control, instrumentation and noise measurement, techniques of noise control, noise control in buildings, sources of noise and examples of noise control, noise control of machinery and electrical equipment,

noise control in transportation, community noise, and the legal aspects of noise problems.

While many scientific articles and reports have been published on various aspects of noise, this is the first comprehensive handbook to be published in the United States on the subject of noise control.

With few exceptions the subject matter is of concern to architects and the book is well organized for access to authoritative information.

Estimating General Construction Costs Second Edition, 1957.

By Louis Dallavia. F. W. Dodge Corporation, 119 W. 40 St., New York, N. Y. 5¾" x 9", 197p, \$8.50

This comprehensive Manual reflects over 22 years of practical experience as a construction estimator and field engineer. The First Edition was awarded a Certificate of Honorable Mention in The 1955 Building Products Literature Competition. In its smaller form the Second Edition provides a more readily handled volume of informative value to those interested in estimating techniques.

Symposium on Full-Scale Tests on House Structures (STP 210)

American Society for Testing Materials, 1916 Race St, Philadelphia 3, Pa. 1957 6" x 9", 64 pp, \$2.50

Includes five presentations entitled: Rigidity & Strength of Houses Built of Plywood Stressed-Cover Panels; Navy Facilities for Evaluating Prefabricated Buildings; Full-Scale Testing of Prefabricated Military Buildings; Structural Test of a House Under Simulated Wind & Snow Loads; Full-Scale Tests of Pre-Cast Multi-Story Flat Construction.

Symposiums on Design & Tests of Building Structures—(a) Seismic & Shock Loading; (b) Glued Laminated & Other Constructions. (STP 209)

American Society for Testing Materials, 1916 Race St, Philadelphia 3, Pa. 6" x 9", 70 pp, \$2.75

Papers in the Symposiums are:

(a) Building Design for Lateral Forces; Report on Recent Oregon Forest Products Laboratory Tests of Cantilevered Wood Mullions Fixed in Diagonally Sheathed & Plywood Panels; Report on US Forest Products Laboratory Tests of Full Size Structural Diaphragms Made in Co-operation with State of California & US Army Engineers.

(b) Developments in Glued Laminated Construction; Factors Affecting Strength & Design Principles of Glued Laminated Construction; Range in Strength Qualities of Dimension Lumber; Developments in Engineered Wood Design & Construction (Other than Glued Laminated); Developments in Softwood Plywood Design & Construction.

Design & Use of TECO Trussed Rafters

Timber Engineering Co. 1319—18th St. NW, Washington 6, DC, 1957. 8½" x 11", 24 pp

Presenting in text & detail drawings the design, use, & economy of simple wood joist & rafter construction in the form of light weight, clear span trusses, known as trussed raft-

ers for spans from 20' to 50'. A list of nation-wide distributors of connectors & framing anchors is included.

National Housing Act, As Amended (Including all Amendments to August 30, 1957).

Federal Housing Administration, Washington 25, DC. 6" x 9", 136 pp, \$1.75.

Containing in loose-leaf form with index guides for placing in 3-ring binder, National Housing Act provisions pertaining to the Federal Housing Administration, as well as other laws & related information.

Terrazzo & Mosaic Data Kit

The National Terrazzo & Mosaic Assn., 711—14th St., NW, Washington 5, DC

A file folder containing data sheets detailing typical applications of terrazzo, technical data & specifications. Also, information on terrazzo & radiant heating, divider strip location, conductive terrazzo in anesthetizing locations, outdoor terrazzo, resiliency tests & maintenance.

American Standard Safety Code for Conveyors, Cableways, & Related Equipment. B 20.1-1957.

American Society of Mechanical Engineers, 29 West 39th St. New York 18, NY. 5¼" x 7¾", 40 pp. \$1.50.

This Code is intended as a guide for the safe construction, elements of design, installation, operation & maintenance of conveyors & conveying machinery.

TECHNICAL NEWS

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(see previous lists in *AIA Bulletins & Journals*)

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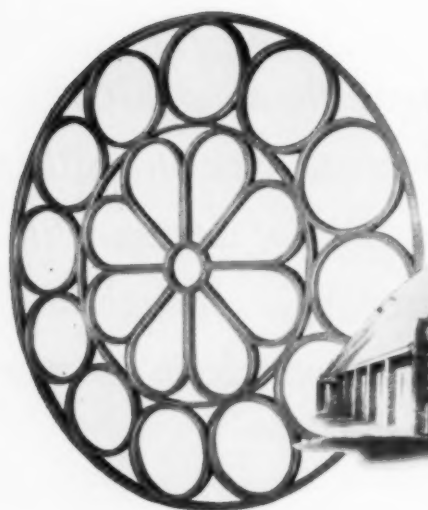
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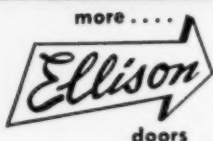


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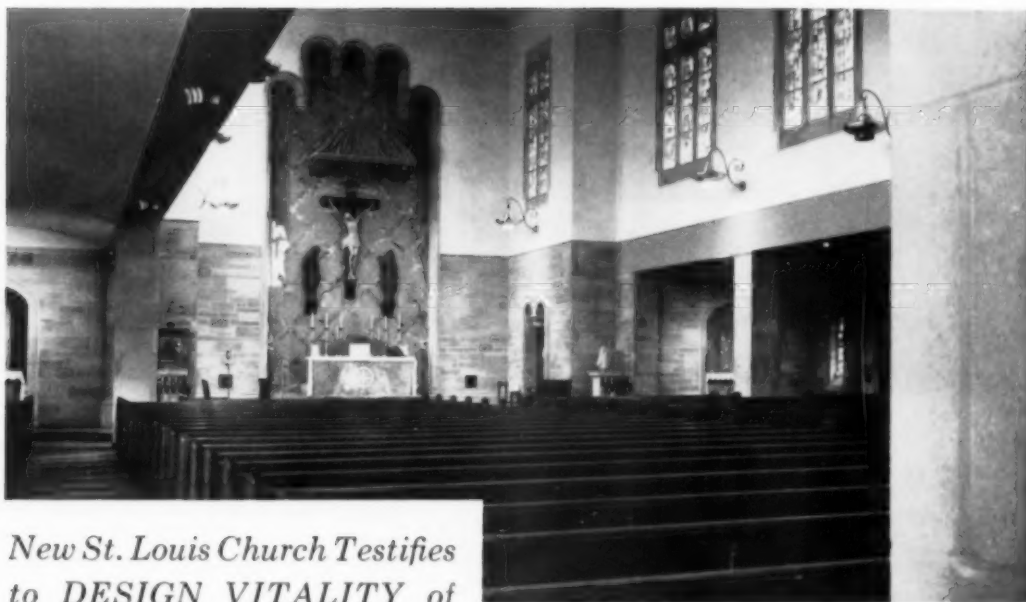


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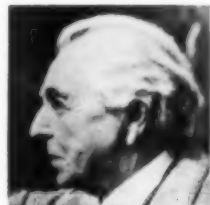
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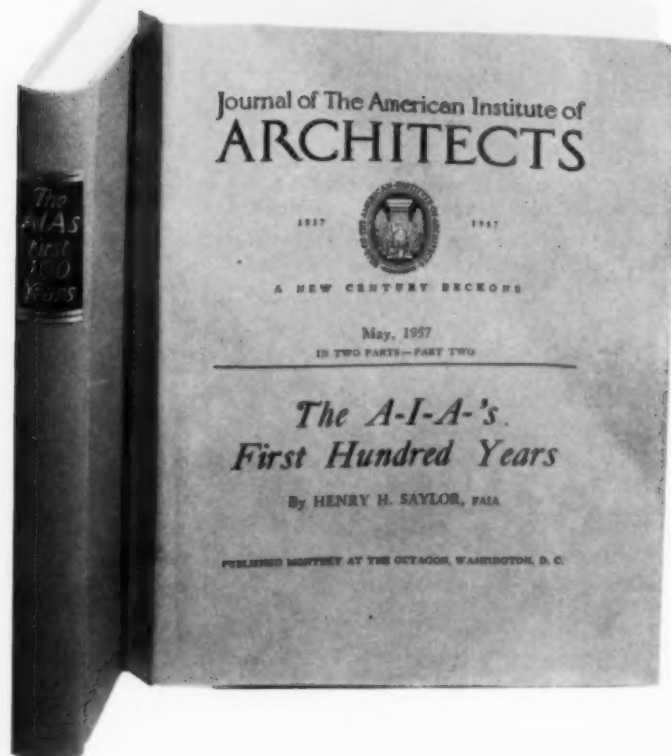
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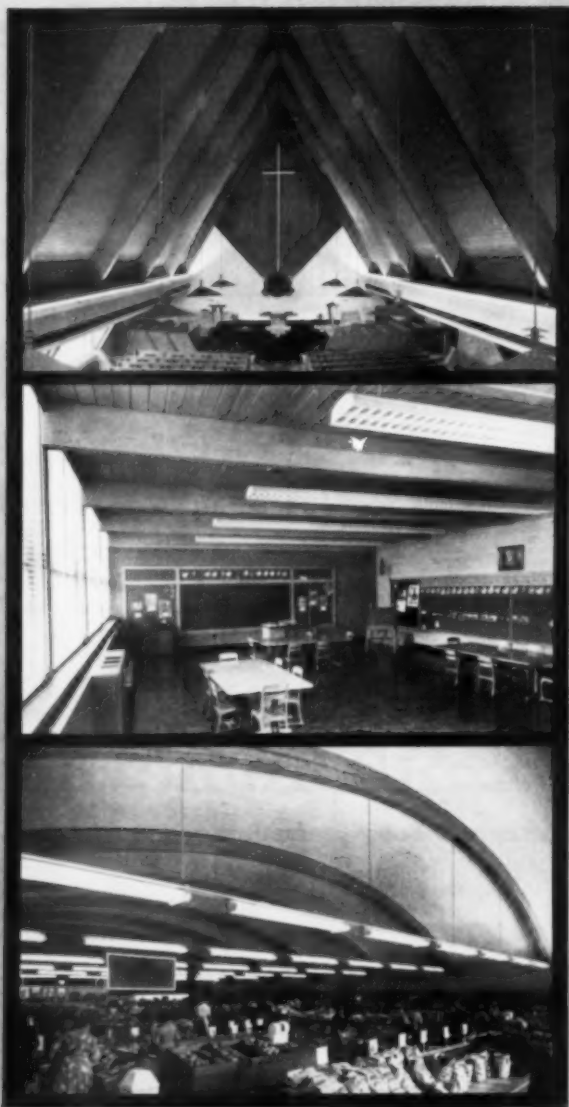


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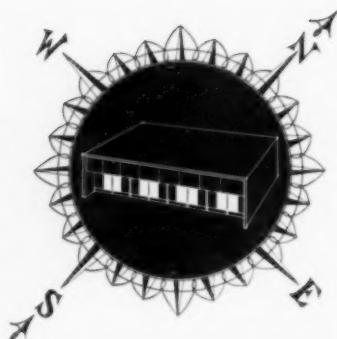
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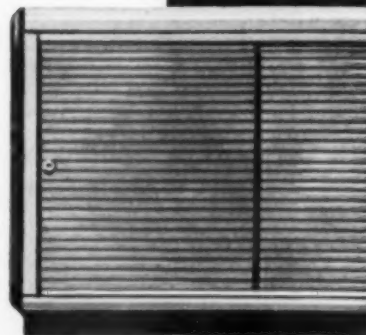
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Name

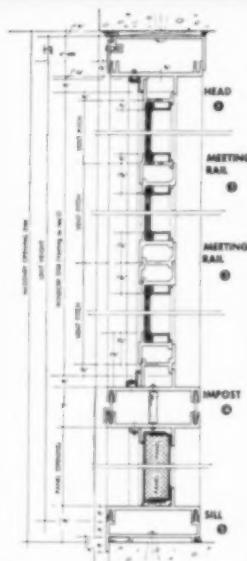
Firm

Street City Zone State

3

PROVEN
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Typical example of one of many
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Detail showing one of many
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Circular of Information on Fee plus Cost System (Owner-Architect)	.03
Form of Agreement between Owner and Contractor (Cost plus Fee Basis)	.10
Circular of Information on Cost plus Fee System (Owner-Contractor)	.06

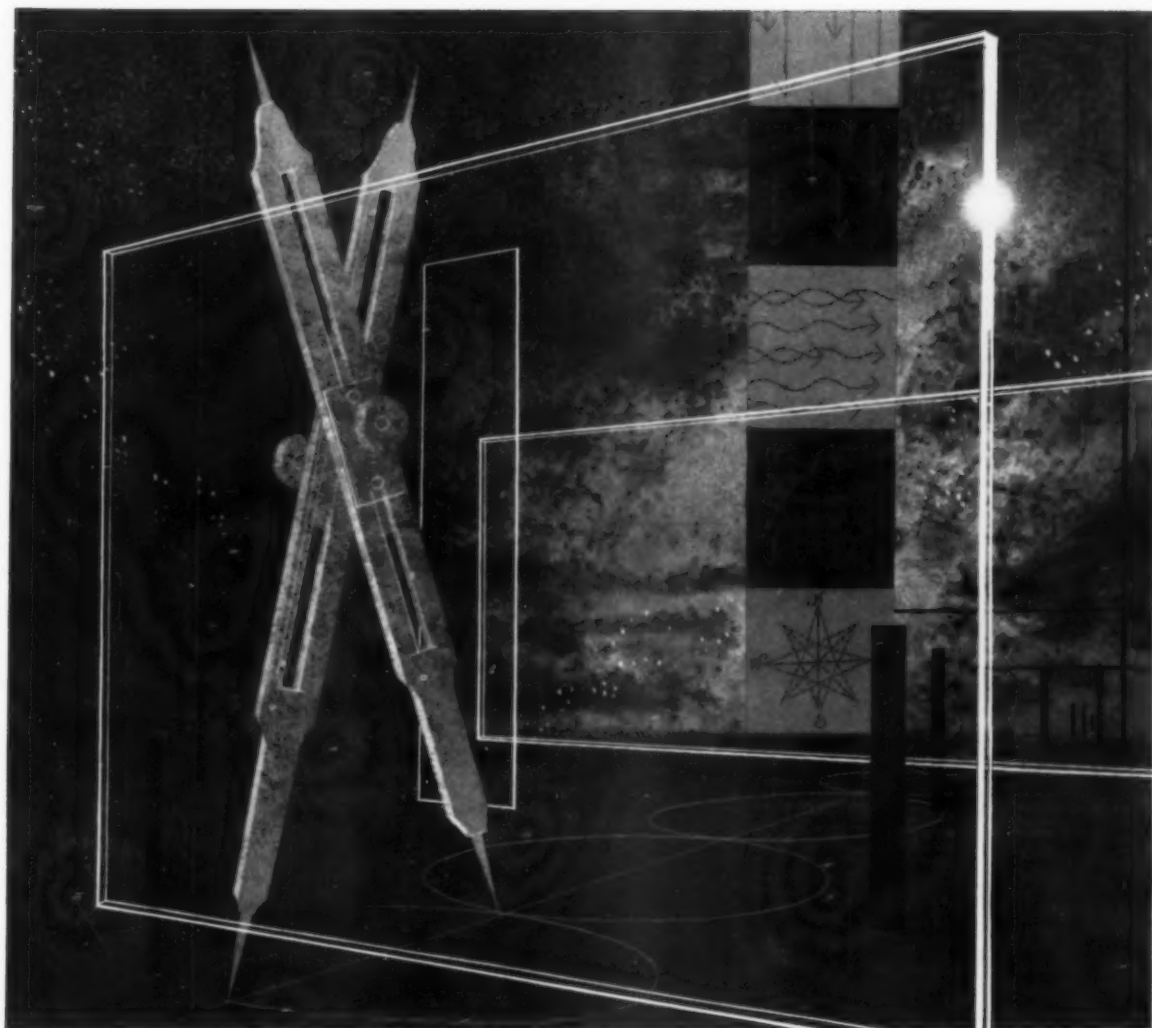
BOOKS

Handbook of Architectural Practice (Revised 1953 edition)	\$4.00
Architect's Specifications — How to Write Them by Goldwin Goldsmith, F.A.I.A.	5.00
Specification Work Sheets	5.00
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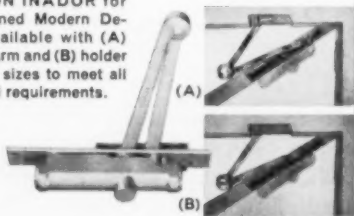


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